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# SELF INSTRUCTIONAL MANUAL for TUMOR REGISTRARS

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## SEER PROGRAM

## BOOK 6

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service National Institutes of Health

# SELF-INSTRUCTIONAL MANUAL FOR TUMOR REGISTRARS

## BOOK 6 - CLASSIFICATION FOR EXTENT OF DISEASE


Originally Prepared for the Louisiana Regional Medical Program

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BOOK 1 -- Objectives, Functions and Activities of a Tumor Registry

BOOK 2 -- Cancer Characteristics and Selection of Cases

BOOK 3 -- Tumor Registrar Vocabulary: The Composition of Medical Terms

BOOK 5 -- Abstracting a Medical Record: Patient Identification, History and Examinations

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# SECTION A

## OBJECTIVES AND CONTENT OF INSTRUCTIONAL PACKAGE 6

## SECTION A

## OBJECTIVES AND CONTENT OF INSTRUCTIONAL PACKAGE 6

In this segment of instruction you will be introduced to various staging systems and provided with a summary staging guide. When you finish Instructional Package 6, you should have an understanding of extent of disease and staging concepts.

Section B introduces you to various staging systems.

Section C is concerned with sources of information in the medical record for determining extent of disease.

Section D presents some practical exercises in staging cancers.

Section E is the summary staging guide.

# SECTION B

# STAGING SYSTEMS

## SECTION B

## STAGING SYSTEMS

A number of different staging systems are being used by physicians for the classification of malignant diseases. The extent to which these systems are being used will vary from hospital to hospital, and even between departments within a hospital. You may encounter reference in the medicals records to a T N M stage or to designations such as Stage IA, Stage IIB or Stage C. These usually will refer to one of the classification systems developed by the American Joint Committee for Cancer Staging and End Results (AJC) or the International Union Against Cancer (UICC). These systems have undergone a number of revisions over the years and are still being revised at the present time. Consequently, it is important to know which revision the clinician is using in order to interpret the stage which you may find recorded in the medical record.

Whatever staging system is used, there is a basic similarity underlying all of them. Each system is based on a careful documentation of the extent of disease (EOD), that is, a detailed description of how far the tumor has spread from the primary site. Only when the extent of disease is known can patients be grouped into broad stage categories.

Extent of disease is a detailed description of the spread of the disease from the site of origin, while stage is a grouping of cases into broad categories, i.e., localized, regional and distant. You must first describe the extent of disease in order to determine the stage. Describing the extent of disease (EOD) of a cancer is one of the most important and difficult parts of abstracting. In this instructional manual, you will learn to use a descriptive scheme developed by the SEER Program of the National Cancer Institute.

T N M--refers to Tumor, Nodes, and Metastasis

The Summary Staging Guide presented in this Self-Instructional Manual is one sanctioned by the American College of Surgeons and used by the SEER Program of the National Cancer Institute. It is divided into the following general categories:

In situ
Localized
Regional, Direct Extension
Regional, Lymph Nodes
Distant, Direct Extension or Metastasis
Distant, Lymph Nodes

The use of these categories provides a measure of the stage of disease at the time the cancer is first diagnosed. The groupings are general enough so that nearly every case can, with careful consideration, be fitted into one of them. These stage categories are defined as follows:

In situ: A noninvasive neoplasm; a tumor which has not penetrated the basement membrane of the epithelial tissue involved. Synonyms are intraepithelial, noninvasive, and noninfiltrating.

Localized: An invasive neoplasm confined entirely to the organ of origin. It includes intraluminal extension where specified. For example, intraluminal extension to immediately contiguous segments of the large bowel is localized unless the invaded segment has an identifiably different pattern of lymph node drainage.

Regional: A neoplasm that has extended beyond the limits of the organ of origin directly into surrounding organs or tissues or into regional lymph nodes by way of the lymphatic system.

Distant: A neoplasm which has spread to parts of the body remote from the primary tumor either by direct extension or by discontinuous metastasis ( implantation, seeding, or via the bloodstream) to distant organs, tissues, or via the lymphatic system to distant lymph nodes.

You will encounter records from which, without assistance, you cannot adequately determine the stage. You must learn to recognize these records and set them aside for review by the tumor registry consultant. Experience has shown that approximately five percent of medical records will require such review.

Staging Rationale

The procedures for determining the stage of a cancer have evolved over the years. Traditionally, stage has been described in terms of one of three categories: localized, regional, or distant (remote). Then, as more became known about malignant neoplasms, it was recognized that the category now known as in situ was a fourth legitimate category. It was recognized that a malignancy described as "in situ," which was non-invasive and confined to a small circumscribed area within the tissue of origin, could be diagnosed microscopically.

A cancer is considered to be localized when all diagnostic procedures indicate that it has not spread beyond the organ of origin. Differences of opinion exist regarding the point to which a malignancy must extend to be categorized as regional instead of localized. These differences of opinion are based primarily on the underlying philosophy. As an example, one extent of disease scheme might define the category of "regional" partly in terms of the potential for spread of the malignancy by more than one lymphatic and/or vascular supply route. A second scheme might describe extent of disease as "regional" only when there is conclusive evidence that the cancer has actually extended beyond the prescribed limits of the primary site.

For example, in the SEER Program, when a tumor of the hepatic flexure extends along the lumen of the bowel to involve the ascending colon, it is still considered localized because lymphatic metastasis for both segments will be to the same lymph nodes. In contrast, when a sigmoid cancer extends into the lumen of the rectum, the potential for lymphatic spread will be to iliac as well as mesenteric lymph nodes. Therefore, in the latter case such extension of disease is considered regional rather than localized.

Since staging is usually determined at diagnosis, cases previously diagnosed and treated in another registry system are to be considered nonanalytic for purposes of analysis.

The most common routes for metastasis of cancers are by way of the vascular and lymphatic systems which transport fluids to and from every portion of the body. The easiest way for a malignant neoplasm to spread from one site to another is for the malignant cells to invade the lymph or blood vessels within the primary site and to pass through the lymphatic and/or vascular system to another site in the body. If the cancer cells are traveling through the lymphatic system, they may be entrapped by the lymph nodes which are part of the lymphatic drainage system for that site. If the cells enter the blood vessels, they are apt to be implanted in the next organ or site of the body supplied by that those vessels. The lungs and liver are common sites of metastases since the body's blood flows directly into these organs.

For some sites of the body there are what is known as "midline positions" where the primary tumor might arise. These are areas which are associated with more than one lymphatic and vascular supply system. For example, the lymphatic drainage for the right side of the mobile portion of the tongue is to the right submandibular nodes; the left side of the tongue is drained by the submandibular nodes on the left side. At the center of the tongue, there is what is known as a midline position. As long as a malignancy stays on one side or the other of the tongue, the lymphatic areas to which the malignancy may metastasize can be predicted quite readily. However, a midline tumor of the tongue can metastasize to either the right or left submandibular nodes or both.

One of the most difficult and arbitrary decisions in staging has to do with invasion of the serosa of the stomach or colon. The serosa is only one-cell thick, so for practical purposes, involvement of the serosa means the cancer is "through" the serosa and can spread to the entire peritoneal cavity. Moreover, the serosa of the outer surface of the stomach and colon is actually the visceral layer of the peritoneum; consequently, invasion of the serosa is considered regional unless there is definite evidence of distant spread.

It is important to realize that extent of disease information is useful no matter what scheme is used for classification of stage. It would be desirable to have all tumor registries follow the same staging system. Lacking such standardization, however, it is mandatory that each registry and registry system be consistent in classifying stage within its own data base. Data using two different systems must not be combined without first employing conversion procedures to ensure that the descriptions are based on the same rules.

## SECTION C

## SOURCES OF INFORMATION IN THE MEDICAL RECORD

## SECTION C
## SOURCES OF INFORMATION IN THE MEDICAL RECORD

### I. HISTORY AND PHYSICAL EXAMINATION

The history and physical examination described by the clinician at first diagnostic work-up for cancer will provide pertinent details which describe the extent of disease.

#### A. Description of primary tumor

The location of the tumor(s) within the primary organ, e.g., lobe, quadrant, etc., and the presence of multiple tumors or foci.

The actual size of the lesion (all dimensions). Pay particular attention as to whether the measurement is in millimeters, centimeters, inches, or is a descriptive term, e.g., "size of walnut." If there is more than one tumor, record the size of the largest.

#### CENTIMETER EQUIVALENCES FOR DESCRIPTIVE TERMS

| Fruits | Cm. |
|---|---|
| Apple | 7 |
| Apricot | 4 |
| Cherry | 2 |
| Date | 4 |
| Fig, dried | 4 |
| Grape | 2 |
| Grapefruit | 10 |
| Kumquat | 5 |
| Lemon | 8 |
| Orange | 9 |
| Peach | 6 |
| Pear | 9 |
| Plum | 3 |
| Tangerine | 6 |
| **Nuts** | |
| Almond | 3 |
| Chestnut | 4 |
| Chestnut, horse | 4 |
| Hazel | 2 |
| Hickory | 3 |
| Peanut | 1 |
| Pecan | 3 |
| Walnut | 3 |
| **Vegetables** | |
| Bean | 1 |
| Bean, lima | 2 |
| Pea | <1 |
| Pea, split | <1 |

| Miscellaneous Food | Cm. |
|---|---|
| Doughnut | 9 |
| Egg | 5 |
| " , bantam | 4 |
| " , goose | 7 |
| " , hen | 5 |
| " , pigeon | 3 |
| " , robin | 2 |
| Lentil | <1 |
| Millet | <1 |
| **Money** | |
| Dime | 1 |
| Dollar, silver | 4 |
| Dollar, half | 3 |
| Nickel | 2 |
| Quarter | 2 |
| Penny | 1 |
| **Other** | |
| Ball, golf | 4 |
| Ball, ping pong | 3 |
| Baseball | 7 |
| Eraser on pencil | <1 |
| Fist | 9 |
| Marble | 1 |
| Match, head | <1 |
| Microscopic | <1 |

## SIZES IN CENTIMETERS MILLIMETERS, INCHES

| | |
|---|---|
| 10 mm = 1 cm | 1 mm = 1/10 cm |
| 2.5 cm = 1 inch | 1 cm = .394 inch |

B. Direct extension of tumor

Direct extension of tumor to other organs or structures may be observed.

C. Lymph node involvement

The clinician will describe the palpability and mobility of accessible lymph nodes, both regional and distant. He may use such terms as "discrete", "freely movable", "slightly fixed", "matted", and "attached to deep structures." He may describe the size, shape, and consistency of these nodes. Of particular importance is the clinician's statement as to whether the nodes are suspected of tumor involvement or whether they are considered tumor free.

If lymph nodes are described as, for example, "a mass", "enlarged", "matted", "a visible swelling", they are probably involved. If you are in doubt, ask a clinician whether the lymph nodes are considered to be involved or not.

When there is a mass demonstrated in the mediastinum, retroperitoneum and/or mesenteric areas, and there is no specific information as to the tissue involved, assume the involvement to be nodal.

Identify lymph nodes as specifically as possible and determine if lymph nodes are ipsilateral, contralateral, or bilateral.

D. Distant site involvement

Mention may be made of probable distant site involvement indicated by:

| | | |
|---|---|---|
| Organomegaly | Pleural effusion | Palpable masses |
| Neurological abnormalities | Ascites | |

## II. X-RAYS, SCANS, AND OTHER IMAGING TECHNIQUES

Review diagnostic reports of x-rays, scanning, echography, and other imaging techniques for mention of tumor involvement. Both positive and negative findings are significant in assessing the extent of disease.

## III. LABORATORY TESTS

Tests which may be significant as an indication of tumor spread and which should be checked together with their normal values are:

Alkaline phosphatase* for all sites
Acid phosphatase for prostate (serum** and marrow)
CEA (carcinoembryonic antigen) for colon and rectum
Serum calcium* for breast
26-hour urine test for pigments (urinary melanogens) for melanoma

*Generally found in automated chemistries (also known as SMA-6, SMA-12 or biochemical profile)

**Record total serum acid phosphatase only if prostatic acid phosphatase fraction is not available.

Pertinent tests are those used in the diagnostic work-up <u>prior</u> to any definitive therapy.

## IV. MANIPULATIVE PROCEDURES

Review the findings of all manipulative procedures used in the diagnostic work-up <u>prior</u> to definitive therapy. Both positive and negative findings are significant in determining extent of disease. Most of these procedures are endoscopies; however, since mediastinoscopies and peritoneoscopies are not technically endoscopic procedures, we use the term "manipulative procedures."

Colonoscopy
Cystoscopy
Mediastinoscopy
Peritoneoscopy
Proctosigmoidoscopy

These findings may reveal the size and location of the tumor, and involvement of lymph nodes, other tissues, and organs.

V. CYTOLOGY REPORTS

Classes IV and V are diagnostic of malignant cells:

Ascitic fluid (paracentesis)
Pleural fluid (thoracentesis)

VI. OPERATIVE PROCEDURES

Abstract pertinent findings from reports of exploratory surgeries and surgical resections. Observations stated in operative reports should be recorded even if at variance with the clinical observations. Note size and location of tumor.

A. The operative report supplements the pathology report by providing information on involvement of organs or tissues not resected.

B. Include statements on nodes involved and removed.

C. Include pertinent findings at laparotomy and thoracotomy.

VII. PATHOLOGY REPORTS (including autopsy)

Abstract the pertinent gross and microscopic findings, both positive and negative; indicate the procedure and whether findings are gross or microscopic.

A. Multifocal tumors

Indicate the pathologist's description of multiple tumors or multiple foci of tumor cells. The terms multifocal and multicentric are equivalent. If more than one tumor, record dimensions of the largest.

B. Direct extension of tumor

1. Note the description of the primary tumor within the primary site including depth of invasion.

2. Record direct extension of tumor beyond the primary site.

C. Lymph nodes

Identify all nodes biopsied and/or excised (regional and/or distant) and indicate if positive or negative. Indicate if any node(s) are fixed (perinodal extension of tumor). If there is no description of resected node(s) in the pathology report, so state. Indicate, if given, the total number of nodes removed and the number of positive nodes.

D. Distant site

Record any and all sites of distant involvement.

E. Autopsy reports

Include pertinent findings if patient dies soon after diagnosis (within two months) and the autopsy report is available. Be aware that one of two possibilities may exist, each of which would lead to a false categorization (not reflect the status at diagnosis):

1. If the surgery has been completely successful, there would be no evidence of disease present at time of death.

2. If treatment had not been successful, the disease would have spread.

Care must be used to ascertain if information from the autopsy report can be used or not.

If care has been taken to review the findings from all the pertinent diagnostic procedures used in the work-up of the patient, it should not be too difficult to arrive at the stage of disease.

The records written by the attending physician give the key to all other parts of the medical record because information from the various reports and procedures are usually clarified and explained in these sections. Although hospitals may differ in the names given to the sections of the medical record which contain the doctor's notes, these generally include the physical examination, progress notes, and discharge summary.

Q1

What subsection of doctor's notes do you think would be most likely to contain an evaluation of stage or extent of disease?

(✓)

☐ a. Progress notes

☐ b. X-ray report

☐ c. Discharge summary

☐ d. Physical examination

Answer: Q1

c--Discharge summary. The physician will usually describe the extent of disease here. Although he may not actually specify the stage, the physician's impression of stage can often be established from information in this section.

Progress notes are remarks regarding the daily status of the patient while in the hospital.

X-ray reports are not part of the doctor's notes but undoubtedly would be evaluated in them.

The physical examination record is a description of the general condition of the patient on admission. Lumps and other organ abnormalities indicative of probable tumor involvement are found in this section.

Q2

John Doe is suspected of having metastatic disease because he has palpable lymph nodes and an enlarged liver. In what section of the medical record would these findings be recorded first in terms of the chronology of what is done to the patient?

(✓)

- ☐ a. Pathology report
- ☐ b. Physical examination
- ☐ c. Progress notes
- ☐ d. Operative report

Answer: Q2

b--Physical examination. On admission of the patient, the examining physician would almost certainly describe these abnormal conditions.

Pathology report contains information which will confirm the presence or absence of tumor in the biopsy or surgical specimen. It will describe the extension of tumor within the primary site and beyond and involvement of lymph nodes which are included in the resected specimen.

Progress notes explained in Question 1.

Operative report is very useful in determining stage. The operative findings will describe areas of tumor involvement observed at surgery since this is the best opportunity for the surgeon to examine tissues, organs and lymph nodes directly, but the physical examination would be the first source in terms of chronology.

Q3

For the most part, x-ray reports describe findings that may indicate metastases to lungs and/or bones. Other abnormalities may be detected, such as, organs which appear to be displaced or enlarged due to malignancy. There are special x-ray studies, other than chest x-rays and bone surveys, that also may give clues to extent of spread. Name two:

1. _____

2. _____

Answer: Q3

Acceptable examples include:

Gastrointestinal (GI) series
Barium enema--intestine
Intravenous pyelogram (IVP)--kidney and ureters
Mammography--breast
Angiography--blood vessels (detect and delineate cancer in many parts of the body)
Lymphangiography--lymph nodes

Q4

The operative report is one of the major documents in the medical record that is useful in categorizing stage. Why is this so?

_____

_____

_____

Answer: Q4

The exploration during a surgical procedure affords the best opportunity for the physician to see directly or to palpate internal organs, inaccessible lymph nodes, and other structures to determine the extent of disease. If possible, the surgeon will usually biopsy an area he believes to contain tumor--for example, a liver nodule or a periaortic lymph node. In any case, he will describe any suspected tumor involvement.

Q5

If there has been a total and wide resection of the tumor together with the lymphatic drainage of the primary site area, it can be ascertained microscopically whether the malignancy is confined to the primary site, has extended into surrounding tissue or has reached regional nodes. In what type of report would you find the results of microscopic examination of the resected tissue recorded?

---

Answer: Q5

Pathology (histopathology) report.

Cytology reports may be an important indication of the spread of disease. Spread of disease usually cannot be determined on these bases alone; they merely confirm the presence or absence of malignant cells. However, the very presence of fluid in certain parts of the body may be diagnostic of metastatic disease, such as, malignant cells in pleural or ascitic fluid.

Q6

Fluid was found in the abdominal cavity of the patient but exfoliative cytology revealed no malignant cells (negative findings).

a. Does this mean that the patient is definitely free of cancer?

---

b. Why? _____

c. Where in the record would you look to find the physician's clinical impression of these negative findings?

_____

Answer: Q6

a. No.

b. Presence of fluid in the abdominal cavity (ascites), in the absence of liver disease, even with negative cytologic findings is a strong indication of metastasis.

c. In the doctor's notes, to determine whether the attending physician considers the fluid (ascites) to be due to spread of the malignancy.

Q7

Name four major sections of a medical record that may contain information about extent of disease.

1. _____

2. _____

3. _____

4. _____

Answer: Q7

1. Doctor's notes (especially PE and discharge summary)
2. X-ray reports
3. Operative reports
4. Pathology reports
5. Endoscopic reports
6. Nuclear medicine reports (scans)
7. Echography (ultrasound) reports
8. Cytology reports
9. Specific laboratory reports
10. Autopsy reports

# SECTION D

# PRACTICAL EXERCISES

## SECTION D

## PRACTICAL EXERCISES

You will recall that malignant neoplasms which originate in epithelial tissues are called carcinomas. The earliest possible stage for this kind of tumor is called in situ. This means that the cancer has not yet penetrated or spread beyond the basement membrane of the epithelial tissue involved. Microscopic examination is necessary to determine the presence of carcinoma in situ.

Q8

If the following types of tissue were examined microscopically and were found to be cancerous, select the one from the list below that could be categorized as carcinoma in situ.

(✓)

- [ ] a. Bone
- [ ] b. Blood
- [ ] c. Colon
- [ ] d. Knee cartilage

Answer: Q8

c--Colon, the only source of tissue mentioned that has epithelium. The others--bone, blood, cartilage--are types of connective tissue. They contain no epithelial cells and have no basement membrane. When these other tissues develop malignant tumors, they are known as sarcomas.

Q9

List the two requirements for a tumor to be classified as in situ.

a._____

b._____

**Answer:** Q9

(In your own words) a. Must originate in epithelial tissue; b. Must not have broken through the basement membrane (determined microscopically). Other words sometimes used instead of in situ include noninvasive, preinvasive, noninfiltrating, intra-epithelial, and stage 0.

Carcinomas are the only types of cancer that can be classified as in situ. This classification is based on a microscopic examination of tissues. Thus, the relationship between sarcomas, carcinomas, and stage of disease categories is as follows:

| | | |
|---|---|---|
| Carcinoma: | Can be classified as: | in situ<br>localized<br>regional<br>remote or distant |
| Sarcoma: | Can be classified as: | localized<br>regional<br>remote or distant |

Q10

You have been asked to review an abstract for accuracy. The description of the malignancy is as follows: "carcinoma in situ of the cervix with involvement of local lymph nodes." Is this an acceptable diagnostic description? YES NO (Circle one). Explain.

Answer: Q10

No (statement is incorrect). You should not classify a cancer as in situ when there is involvement beyond the epithelial layer of tissue wherein the cancer originated. In this example, the cancer had spread to regional lymph nodes sometimes called local nodes although this is a misnomer. If the pathologist were asked to make more sections, he would very likely find an area where the cancer is actually invasive. This could be the area from which the cancer spread to the lymph nodes.

Q11

Which of the following diagnostic statements describes an in situ carcinoma.

(✓)

- ☐ a. Preinvasive carcinoma
- ☐ b. Noninfiltrating carcinoma
- ☐ c. Intra-epithelial malignant neoplasm
- ☐ d. Stage 0 carcinoma
- ☐ e. No stromal invasion
- ☐ f. All of the above
- ☐ g. All but d

Answer: Q11

f--All of the above. The terms noninvasive, preinvasive, non-infiltrating, intra-epithelial, and Stage 0 are terms used to describe an in situ carcinoma. In situ literally means "in the natural or normal place", i.e., confined to the tissue of origin without invasion of underlying tissues.

Q12

If the only information regarding extent of disease is contained in the pathology report and states "malignancy confined to the epithelium", how would this case be categorized?

(✓)

- [ ] a. Stage not recorded
- [ ] b. In situ
- [ ] c. Localized
- [ ] d. Regional

Answer: Q12

b--Even though there is no actual statement that the tumor is in situ, it meets the proper criterion: malignant epithelial tissue microscopically determined, but not invasive.

An invasive tumor that seems to be confined entirely to the organ of origin is localized. In order for a malignant tumor to be classified as localized, the lesion must not extend beyond the outer limits of the primary organ, and there must be no evidence of metastasis anywhere else in the body.

Q13

If the only information regarding extent of disease of a bladder tumor is contained in the pathology report which states "invasion of lamina propria," how would this case be categorized?

(✓)

☐ a. In situ (noninvasive)

☐ b. Localized (invasive)

☐ c. Regional (by direct extension)

☐ d. Distant

Answer: Q13

This case would be categorized as localized. It is still within the organ of origin, but has invaded the subepithelial connective tissue.

Q14

If an endometrial cancer is described as "invading the myometrium, but not beyond", how would you stage this case?

(✓)

- [ ] a. Regional (by direct extension)
- [ ] b. Distant
- [ ] c. Localized
- [ ] d. Regional (to regional nodes)

Answer: Q14

Localized. It is still confined to the organ of origin. The myometrium is the muscular wall of the uterus.

Q15

A neoplasm which is classified as <u>localized</u> might be:

(✓)

- ☐ a. Carcinoma
- ☐ b. Sarcoma
- ☐ c. Either
- ☐ d. Neither

Answer: Q15

c--Either. Carcinomas and sarcomas may both be localized. A localized tumor need not have originated in epithelial tissue.

Q16

Give two requirements for a malignancy to be classified as localized.

a. _____

b. _____

Answer: Q16

(in your own words)
a. Confined to organ of origin.
b. No evidence of metastasis elsewhere.

Q17

Microscopic examination reveals a malignancy, originating in the epithelial tissue of an organ, to have invaded deeply into the organ wall. Also, it has spread extensively within the organ itself. On this basis how would the lesion be classified?

(✓)

☐ a. In situ

☐ b. Localized

☐ c. Regional

☐ d. Distant

Answer: Q17

b--Localized. Even though the tumor has spread throughout the organ it is still confined to it with no evidence of metastasis outside the organ.

When the primary site is an internal organ it is usually not possible, unless special diagnostic procedures have been employed, to determine the extent of disease. Exploratory surgery or an x-ray series may be used to provide extent of disease information.

Q18

Which of the following reports should provide the <u>best</u> information as to the extension of the primary tumor?

(✓)

- ☐ a. X-ray report
- ☐ b. Hematology report
- ☐ c. Operative report
- ☐ d. Post-Operative Histopathology Report

Answer: Q18

d--The post-operative histopathology report. This report usually contains the best information about the type of tumor, its location, and the extent of disease. However, the operative report often will contain useful information about extent of disease. In particular, this report will note whether neighboring organs, tissues, or lymph nodes not excised were involved or thought to be free of disease.

Q19

A carcinoma of the lung has been clinically evaluated. X-ray reports indicate a mass consistent with cancer of the lung. The patient left against medical advice (AMA) and no further studies were done. In what category should this case be classified?

(✓)

- ☐ a. Benign
- ☐ b. Distant metastasis
- ☐ c. Localized
- ☐ d. Stage not recorded

Answer: Q19

d--Stage not recorded. There is not enough evidence to say that this is a localized tumor. When in doubt, it is better to classify the case as unstaged.

Q20

Name the two stages discussed thus far which may be used to classify the extent of disease in cancer and the requirements of each.

a. _____

_____

b. _____

_____

Answer: Q20

a. In situ--noninvasive; origin is in epithelial tissue; microscopic examination of tissues is necessary to establish the diagnosis.

b. Localized--invasive; confined to organ of origin with no apparent spread outside the organ; this applies to both epithelial and connective tissue tumors.

You have now learned about the two earliest stages that will be used in classifying extent of disease. The next most advanced stage is regional.

A tumor is classified as regional when it has extended beyond the limits of the organ of origin or beyond the anatomical limits of the primary site. This extension may be 1) directly into surrounding organs or tissue; 2) to regional lymph nodes; or as a combination of 1) and 2) with no evidence of further spread.

Q21

Describe the differences in the following: carcinoma of the cervix in situ, carcinoma of the cervix localized, and carcinoma of the cervix regional.

a. _____

b. _____

c. _____

Answer: Q21

a. In situ--in epithelium only, not microscopically invasive.
b. Localized--invasive but no extension beyond cervix.
c. Regional--may have direct extension to surrounding organs or tissues, or spread to regional lymph nodes, or both.

Q22

For each of the diagnostic descriptions below, how would the tumor be staged--in situ, localized, or regional?

_____a. The patient had a malignant tumor of the gallbladder that on microscopic examination had invaded the musculature of the gallbladder wall. Diagnostic workup did not reveal any other area of tumor involvement.

_____b. The patient had a malignant tumor that at surgery appeared to be confined to the gallbladder. All other diagnostic tests were negative.

_____c. The patient had a malignant tumor of the gallbladder with direct extension into the common bile duct. No evidence of distant metastasis were present.

Answer: Q22

a--Localized
b--Localized
c--Regional (by direct extension)

Two factors are important in using the regional category: (1) it must be established that the cancer is more than localized; (2) remote spread must be reasonably ruled out. Statements a and b do not indicate that the malignancy is more than localized.

Q23

Biopsies taken during cystoscopic examination indicate a tumor of the bladder is invading through the musculature of the bladder wall and into perivesical tissue. If there is no evidence of further spread, how would this case be staged?

(✓)

- ☐ a. In situ
- ☐ b. Localized
- ☐ c. Regional (by direct extension)
- ☐ d. Remote (distant spread)

Answer: Q23

c--Regional. Meets the requirements of advancing further than the localized stage, that is beyond the bladder wall but with no evidence of distant metastasis.

Q24

Usually tumors of the colon originate in the mucosa or inner layer of the bowel wall and then, enlarging in all directions, penetrate into the bowel wall and protrude into and encircle the lumen. Lateral spread through the bowel wall is more significant for staging than that up and down the bowel wall. The pathology report of a resected specimen of the colon states, " . . . lesion has extended into the bowel wall." How would this be staged?

(✓)

- ☐ a. In situ
- ☐ b. Localized
- ☐ c. Regional
- ☐ d. Remote

Why? _____

_____

Answer: Q24

b--Localized. The interpretation would be that the tumor is localized since it is "confined to the organ of origin." We know that this is a invasive tumor, but on microscopic examination it does not appear to have penetrated the bowel wall to involve adjacent tissue.

Q25

In the previous question the pathology report stated, " . . . has extended <u>into</u> the bowel wall." If the report had stated " . . . with extension <u>through</u> the bowel wall and the cytology report had indicated that malignant cells, Class V, were found in the ascitic fluid," would the extent of disease still be classified as <u>localized</u>? YES. NO.

Answer: Q25

No. With positive cytology for the ascitic fluid, evidence is presented that spillage of diseased cells has begun or a metastatic site had been established. Therefore, it can be assumed that the extent of disease has progressed to a more advanced stage than localized. This case would be classified as distant.

Q26

How would you classify the following cases?

_____a. A carcinoma of the stomach has invaded the submucosa of the stomach wall, but no intraluminal extension has occurred.

_____b. A carcinoma of the colon has invaded the muscularis and extended laterally along the muscularis layer for two inches.

_____c. A carcinoma of the lung has broken through the serosal covering of the lung, the visceral pleura.

_____d. A carcinoma of the small intestine has extended through the muscularis to the serosa.

Answer: Q26

a--Localized. It is no longer "in situ" but has invaded the next tissue layer.

b--Localized. Carcinoma is still confined to tissues belonging to the organ of origin.

c--Regional. Carcinoma has broken into the pleural cavity.

d--Regional. "Extension to the serosa" is to be interpreted as involving (into) the serosa. The serosa is the peritoneal covering of the intestine, and its involvement is considered regional.

Q27

The following statement is taken from a medical record: "Carcinoma of the stomach with involvement of local lymph nodes." In the absence of further evidence, how should this be staged?

(✓)

☐ a. In situ

☐ b. Localized

☐ c. Remote

☐ d. Regional

Why?_____

_____

**Answer:** Q27

d--Regional (nodes). In this context, the disease should be staged as regional. In the diagnostic statement, the term local refers to local lymph nodes in relation to the primary site, not the extent of disease. In this instance, they might better have been referred to as regional lymph nodes or perigastric lymph nodes.

Q28

What are the requirements for a case to be staged "regional?"

---

---

Answer: Q28

Tumor has extended beyond the limits of the primary site,
1) into surrounding organs or tissues by direct extension;
2) spread to regional lymph nodes by metastasis; or both
1) and 2) and apparently has spread no further.

Q29

A malignancy is considered to be in its most advanced stage when it has spread to parts of the body that are far removed and distant from the primary tumor. This spread may be by direct extension (beyond immediately adjacent organs or tissues) or by discontinuous spread. It may also indicate involvement of distant lymph nodes, i.e., lymph nodes beyond those which receive the primary (regional) lymphatic drainage from an organ or area of the body. What is the name of the extent of disease category for this stage? _____

Answer: Q29

Remote spread. You have seen this term during your instruction. Other terms such as distant and disseminated are used, too.

Q30

You should now know the names of all the categories for classifying the extent of disease as described in this manual. Name them in order according to degree of spread, from least to most.

a._____

b._____

c._____

d._____

Answer: Q30

a. In situ
b. Localized
c. Regional
d. Distant or remote

There are three different ways that distant metastases of tumor cells are known to occur. Cancer cells may become disconnected from the organ of origin and reach distant parts of the body by way of the bloodstream, lymph channels, and body cavities.

Q31

If, during growth, a tumor invades an artery or vein, how is distant spread most likely to take place? _____

_____

Answer: Q31

Through the bloodstream. Since arteries and veins transport blood, the tumor cells will travel to other parts of the body in the circulating blood.

In the development of a blood-borne metastasis, there are three main steps: first, invasion of the blood vessel wall itself; second, breaking loose of one or more cancer cells which are then carried by the blood to other parts of the body; third, attachment of cancer cell(s) to some other organ or part of the body and invasion of that area.

Some medical practitioners may assume that once a blood vessel has been invaded, remote metastasis has or soon will occur. However, when you abstract a record, you must consider the content of that record. If a local blood vessel has been invaded, you cannot assume that metastasis has occurred unless the record contains evidence of this. If the record contains no evidence of metastasis, then:

1. The stage is <u>localized</u>, if the cancer is confined to the primay site and the blood vessels within that site.

2. The stage is <u>regional</u>, if the cancer has invaded organs, structures and/or major blood vessels adjacent to the primay site, and/or is present in regional lymph nodes.

Q32

The pathology report on a resected specimen states that there is "blood vessel invasion." Does this indicate that the extent of disease is remote? Explain your answer. _____

_____

_____

Answer: Q32

No. Even though invasion of a blood vessel has occurred, it does not necessarily mean that the tumor cells have already traveled beyond the primary site and that a secondary site, distant from the primary, has been established.

# SECTION E

# SUMMARY STAGING GUIDE

FOREWARD

For ease in coding, the SEER Program favors the expanded extent of disease schemes. They act as a guide to complete reporting, and they indicate the usual progression of disease patterns. Often, however, comparisons are necessary with historical or other series for which only general staging categories are available. Therefore, this staging guide was developed which summarizes the expanded extent of disease categories into three general staging groups (i.e., localized, regional, and distant). Sometimes a series is so small that only general categories produce enough cases for a meaningful analysis. Many conditions may be grouped together which may seem incongruous, but such groupings are unavoidable if the extent of disease codes are to be summarized into three or four staging categories. Stage categories are based on a combination of clinical observations and operative-pathological evaluations. The priority order is pathologic, operative, clinical.

In order to make the staging groups, insofar as we are able, consistent with categories developed by the American Joint Committee for Cancer Staging and End Results Reporting (AJC) and by the International Union Against Cancer (UICC) and to give consideration to the prognostic significance (survival probability) of various factors, a grouping subdividing the localized, regional, and distant categories was necessary. The subdivisions can always be summarized into the three familiar

stage categories--localized, regional, and distant, or other alternative groupings. For example, for colon and rectum "confined to the mucosa" is coded $L_1$. These cases can then be included with either the "in situ" or the "localized" stage of disease depending on the rules of the series with which the comparison is being made. For melanoma, localized cases are subdivided into four groups ($L_1$ through $L_4$) in order to indicate Clark's levels of invasion. Sites considered to be distant involvement by direct extension are coded $D_1$ as distinct from $D_2$ or $D_3$ which are reserved for metastatic involvement.

# ORGANIZATION OF SUMMARY STAGING GUIDE

I. Summary staging definitions

**IN SITU:** Intraepithelial, noninvasive, noninfiltrating

**LOCALIZED:** Within organ

a. Invasive cancer confined to the organ of origin.

b. Intraluminal extension where specified For example, intraluminal extension to immediately contiguous segments of the large bowel is coded $L_3$ unless the invaded segment has an identifiably different pattern of lymph node drainage.

**REGIONAL:** Beyond the organ of origin

a. By direct extension to adjacent organs/tissues

b. To regional lymph nodes

c. (a) and (b)

**DISTANT:** Direct extension or metastasis

a. Direct continuity to organs other than above

b. Discontinuous metastasis

c. To distant lymph nodes

II. Site definitions

The international Classification of Diseases for Oncology (ICD-O) codes are included at the top of the page for each scheme, however, the first digit (1) has been dropped in compliance with the practice of the SEER program.

## DEFINITION OF ANATOMIC SITES WITHIN THE ORAL CAVITY ACCORDING TO THE AMERICAN JOINT COMMITTEE ON CANCER STAGING

IPS, upper and lower, form the upper and lower anterior wall of the oral avity. They consist of an exposed surface of modified epidermis commonly eferred to as the vermilion surface, which extends from commissure to ommissure and the mucous membrane lining the inner surface of the lips.

OMMISSURE OF LIP is the point of union of upper and lower lips (corner f mouth).

OSTERIOR ONE-THIRD OF TONGUE (base of tongue) consists of the less mobile ortion of the tongue which extends inferiorly from the line of circumallate papillae to the base of the epiglottis, the pharyngoepiglottic and lossoepiglottic folds (which bound the vallecula).

NTERIOR TWO-THIRDS OF TONGUE consists of the freely movable portion of the ongue which extends anteriorly from the line of circumvallate papillae to the ot of the tongue at the junction of the floor of the mouth. It is composed f four areas: (1) Tip, (2) Lateral borders, (3) Dorsum, and (4) Undersurface non-villous surface).

LOOR OF MOUTH consists of a semilunar shaped space over the mylohyoid and ypoglossus muscles, extending from the inner surface of the lower alveolar idge to the root of the tongue. Its posterior boundary is the base of the nterior pillar of the tonsil. It is divided into two sides by the frenulum f the tongue and contains the ostia of the submaxillary and lingual salivary lands.

OWER GINGIVA includes the alveolar process of the mandible and its covering ucosa, which extends from the line of attachment of mucosa in the buccal utter to the line of free mucosa of the floor of the mouth. Posteriorly it xtends to the ascending ramus of the mandible (retromolar trigone).

PPER GINGIVA is the covering mucosa of the upper alveolar ridge, extending rom the line of attachment of mucosa in the upper gingival buccal gutter o the junction with the hard palate. Its posterior margin is the pper end of the pterygopalatine arch.

UCCAL MUCOSA includes all the mucous membrane lining the inner surface of he cheek.

ARD PALATE consists of the semilunar area between the upper alveolar ridges nd the mucous membrane covering the palatine process of maxillary palatine ones. It extends from the inner surface of the superior alveolar ridge o the posterior edge of the palatine bone.

SOFT PALATE consists of mucosa covering the oral cavity side of the palatine muscles and extends from the posterior edge of the hard palate to the free border of the soft palate and includes the uvula. Its superior lateral margin is the pterygomandibular raphe. The inferior lateral margin completes the faucial arch (glossopalatine arch) and includes the anterior surface of the anterior tonsillar pillar.

NASOPHARYNX

Posterior Superior Wall (vault) extends from the superior border of the choana to the level of the free border of the soft palate. The lateral limit is the groove between the lateral wall and the base of the skull.

Lateral Wall extends from the base of the skull on each side to the level of the free border of the soft palate. It includes Rosenmuller's fossae (pharyngeal recesses).

OROPHARYNX

Posterior Wall extends from the free borders of the soft palate to the tip of the epiglottis.

Lateral Wall includes the tonsillar pillars, tonsillar fossae, and tonsils.

Anterior Wall consists of the lingual (anterior) surface of the epiglottis, and the pharyngoepiglottic and glossoepiglottic folds which bound the vallecula.

HYPOPHARYNX

Pyriform Sinus extends from the pharyngoepiglottic fold to the upper edge of the esophagus, between the inner surface of the thyroid cartilage and the posterior lateral surface of the arytenoid and cricoid cartilages.

Post-Cricoid Area extends from the posterior surface of the arytenoid cartilages and their connecting folds to the inferior surface of the cricoid. The lateral margin is the anterior part of the pyriform sinus.

Posterior Pharyngeal Wall extends from the level of the tip of the epiglottis to the inferior margin of the cricoid cartilage, and laterally to the posterior margins of the pyriform sinus.

## NONSPECIFIC STAGING SCHEME

In situ
Localized
Regional, direct extension only
Regional, nodes only
Regional, direct extension and regional nodes
Regional, NOS
Non-localized, NOS
Distant
Unstaged

This nonspecific staging scheme applies to the following primary sites:

| ICD-O Number | PRIMARY SITE CODE |
|---|---|
| 405 | Mucosa of lips, NOS |
| 408 | Two or more categories of lip |
| 409 | Lips, NOS |
| 415 | Junctional zone of tongue |
| 418 | Two or more categories of tongue |
| 419 | Tongue, NOS |
| 422 | Sublingual gland |
| 428 | Two or more categories of major salivary glands |
| 429 | Major salivary gland, NOS |
| 438 | Two or more categories of gum |
| 439 | Gum, NOS |
| 455 | Palate, NOS |
| 458 | Two or more categories of other parts of mouth |
| 459 | Oral cavity |

490 Pharynx, NOS
491 Waldeyer's ring, NOS
498 Neoplasms of lip, oral cavity and pharynx whose point of origin cannot be assigned to any one of the categories 40 through 48
499 Ill-defined sites in lip, oral cavity, and pharynx

508 Junctions of esophagus
509 Esophagus, NOS

510 Cardioesophageal junction (excluding cardia of stomach)

523 Meckel's diverticulum
528 Two or more categories of the small intestine
529 Small intestine, NOS

535 Appendix
538 Two or more categories of colon
539 Colon, NOS

548 Other parts of rectum

568 Two or more categories of gallbladder and extrahepatic bile ducts
569 Biliary tract, NOS

573 Pancreatic duct
574 Islets of Langerhans
578 Two or more categories of pancreas
579 Pancreas, NOS

580 Retroperitoneum
588 Specified parts of peritoneum
589 Peritoneum, NOS

590 Intestinal tract
598 Neoplasms of digestive organs and peritoneum whose points of origin cannot be assigned to any one of the categories 50- through 58-
599 Gastrointestinal tract, NOS

600-605, 608-609
Nasal cavities, accessory sinuses, middle ear, inner ear

613 Laryngeal cartilage
618 Two or more categories of larynx
619 Larynx, NOS

620 Trachea
622 Carina (excluding main bronchus)

630 Parietal pleura
631 Visceral pleura
638 Two or more categories of pleura
639 Pleura, NOS

640-643, 648-649
Thymus and mediastinum (excluding histology 959 thru 969, 975)

650, 658-659
Other and ill-defined sites within respiratory system and intrathoracic organs

690-691, 699
Blood, bone marrow (hematopoietic system)

692 Spleen (excluding histology 959 thru 969, 975)

693 Reticuloendothelial system, NOS

710, 712-719
Connective tissue and other soft tissue

738 Two or more categories of skin (melanotic and nonmelanotic)
739 Skin, NOS (melanotic and nonmelanotic)

799 Uterus, NOS

819 Placenta

833 Broad ligament
834 Parametrium
835 Round ligament
838 Other uterine adnexa
839 Uterine adnexa

848 Two or more categories of other and unspecified female genital organs
849 Female genital tract, NOS

873 Body of penis
875 Epididymis
876 Spermatic cord
877 Scrotum, NOS
878 Other parts of male genital organs
879 Male genital tract, NOS

887 Urachus

893 Urethra
894 Paraurethral gland
898 Two or more categories of other urinary organs
899 Urinary system, NOS

900-909
Eye and lacrimal gland

910-919
Brain

920-923, 928-929
Other and unspecified parts of nervous system

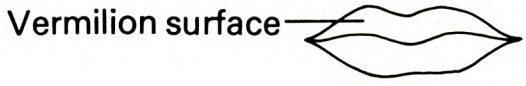
940, 941, 943-946, 948-949
Other endocrine glands

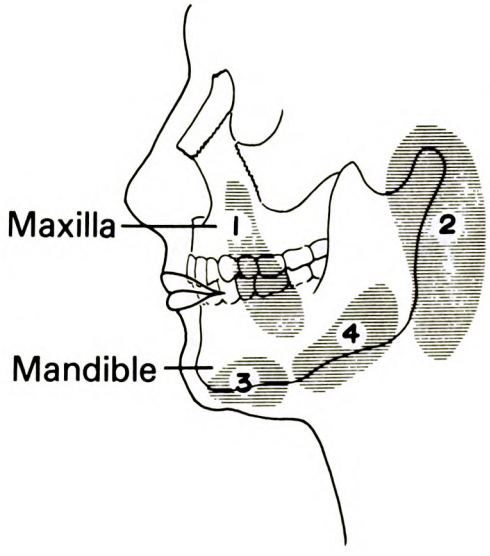
950-955, 958 Other ill-defined sites

999 Unknown primary site

## SITE-SPECIFIC SUMMARY STAGING GUIDE

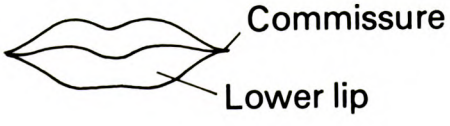
## UPPER LIP

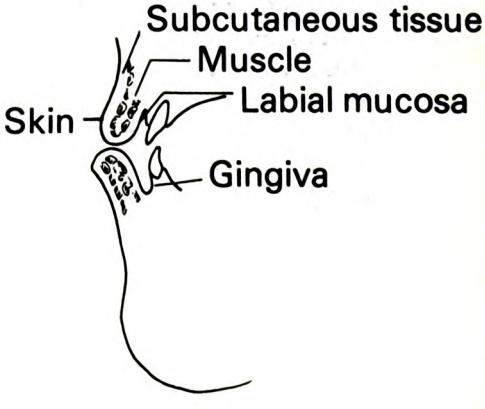



**REGIONAL NODES**

1. Facial
2. Parotid
3. Submental
4. Submandibular



UPPER LIP
400, 403

IN SITU; noninvasive

LOCALIZED

Vermilion surface
Skin of lip
Labial mucosa (inner lip)
Musculature
Multiple foci

Localized, NOS

REGIONAL, Direct Extension

R 1 if:
Commissure(s) of lips
Lower lip

R 2 if:
Buccal mucosa (inner cheek)
Gingiva, upper

R 3 if:
Maxilla
Nose

REGIONAL, Lymph Nodes

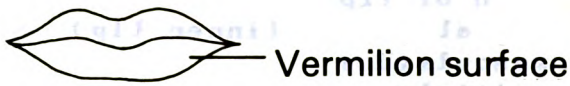
Facial: buccinator
Parotid: infra-auricular, preauricular
Submental
Submandibular (submaxillary)

DISTANT, Direct Extension or Metastasis

DISTANT, Lymph Nodes

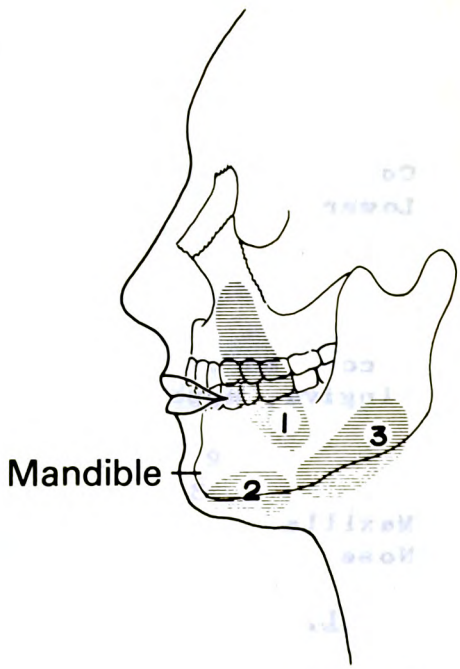
Internal jugular
Upper cervical (including cervical, NOS)
Supraclavicular (transverse cervical)
Other distant nodes

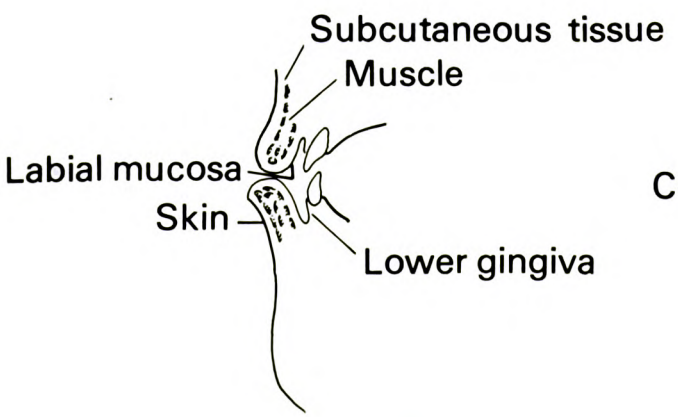
## LOWER LIP

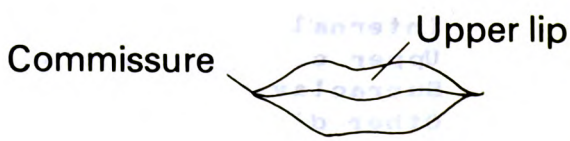



REGIONAL NODES

1. Facial
2. Submental
3. Submandibular



LOWER LIP
401, 404

**IN SITU**; noninvasive

**LOCALIZED**

Vermilion surface
Skin of lip
Labial mucosa (inner lip)
Musculature
Multiple foci

Localized, NOS

**REGIONAL**, Direct Extension

| | R if: |
|---|---|
| | 1 |
| Commissure(s) of lips | |
| Upper lip | |

| | R if: |
|---|---|
| | 2 |
| Buccal mucosa (inner cheek) | |
| Gingiva, lower | |

| | R if: |
|---|---|
| | 3 |
| Mandible | |

**REGIONAL**, Lymph Nodes

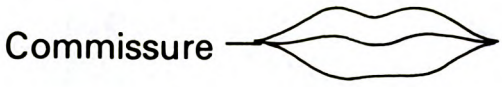
Facial: mandibular
Submental
Submandibular (submaxillary)

**DISTANT**, Direct Extension or Metastasis

**DISTANT**, Lymph Nodes

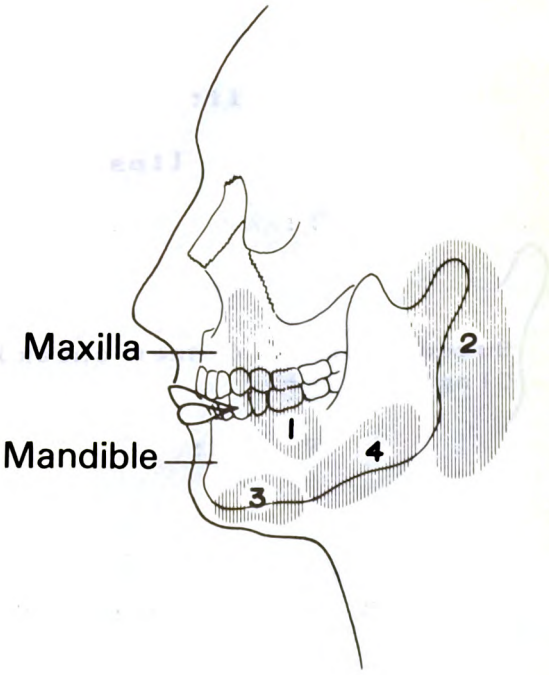
Internal jugular
Upper cervical (including cervical, NOS)
Supraclavicular (transverse cervical)
Other distant nodes

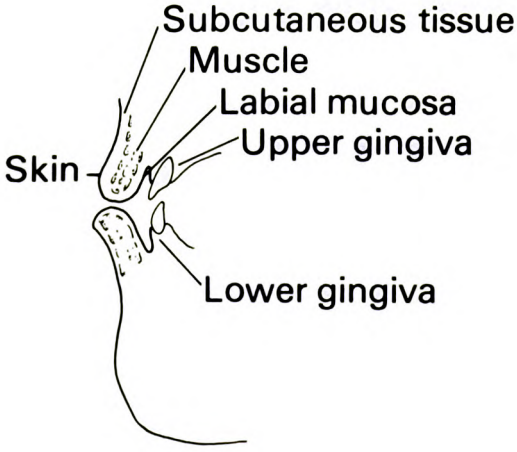
## COMMISSURE OF LIPS

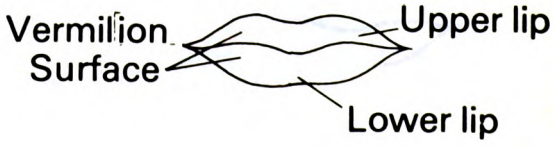



REGIONAL NODES

1. Facial
2. Parotid
3. Submental
4. Submandibular



**COMMISSURE OF LIP**
**406**

**IN SITU**; noninvasive

**LOCALIZED**

Vermilion surface
Skin of lip
Labial mucosa (inner lip)
Musculature

Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Both lips

R if:
2
Buccal mucosa (inner cheek)
Gingiva

R if:
3
Maxilla
Mandible
Nose

**REGIONAL**, Lymph Nodes

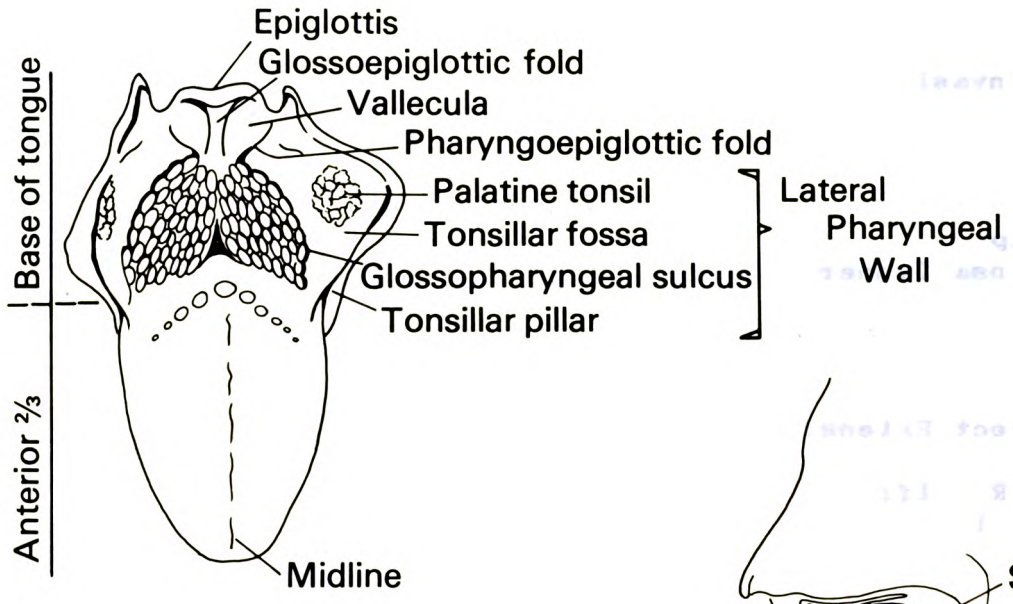
Facial: mandibular
Parotid: infra-auricular, preauricular
Submental
Submandibular (submaxillary)

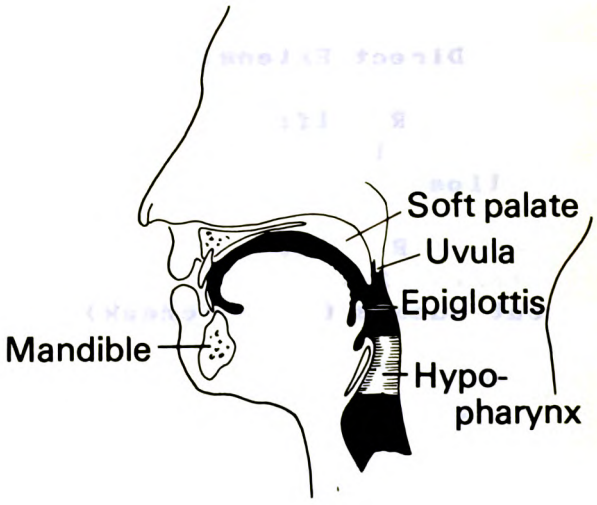
**DISTANT**, Direct Extension or Metastasis

**DISTANT**, Lymph Nodes

Internal jugular
Upper cervical (including cervical, NOS)
Supraclavicular (transverse cervical)
Other distant nodes

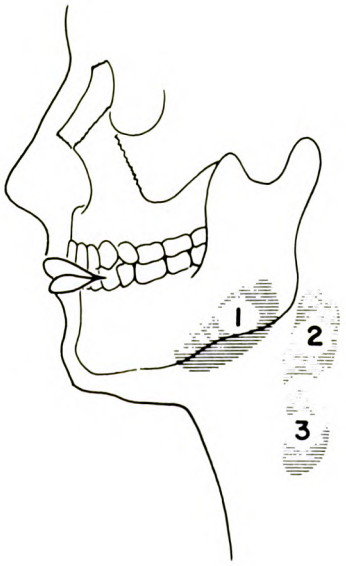
## BASE OF TONGUE

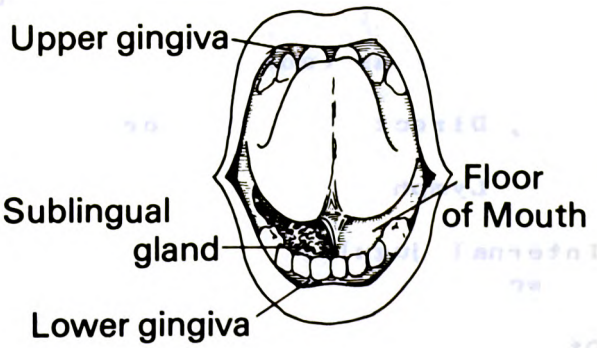



REGIONAL NODES

1. Submandibular
2. Upper cervical
3. Internal jugular



BASE OF TONGUE
410

IN SITU; noninvasive

LOCALIZED

L if:
1
Confined to posterior 1/3 of tongue on one side

L if:
2
Midline tumor; tumor has crossed midline

L if:
x
Localized, NOS

REGIONAL, Direct Extension

R if:
1
Anterior 2/3 of tongue
Gingiva, lower
Sublingual gland

R if:
2
Vallecula, including pharyngoepiglottic and glossoepiglottic folds
Epiglottis, lingual (pharyngeal) surface
Floor of mouth
Lateral pharyngeal wall (tonsillar pillars, tonsillar fossae, tonsils)

REGIONAL, Lymph Nodes

Submandibular (submaxillary)
Internal jugular: subdigastric
Upper cervical (including cervical, NOS)

DISTANT, Direct Extension or Metastasis

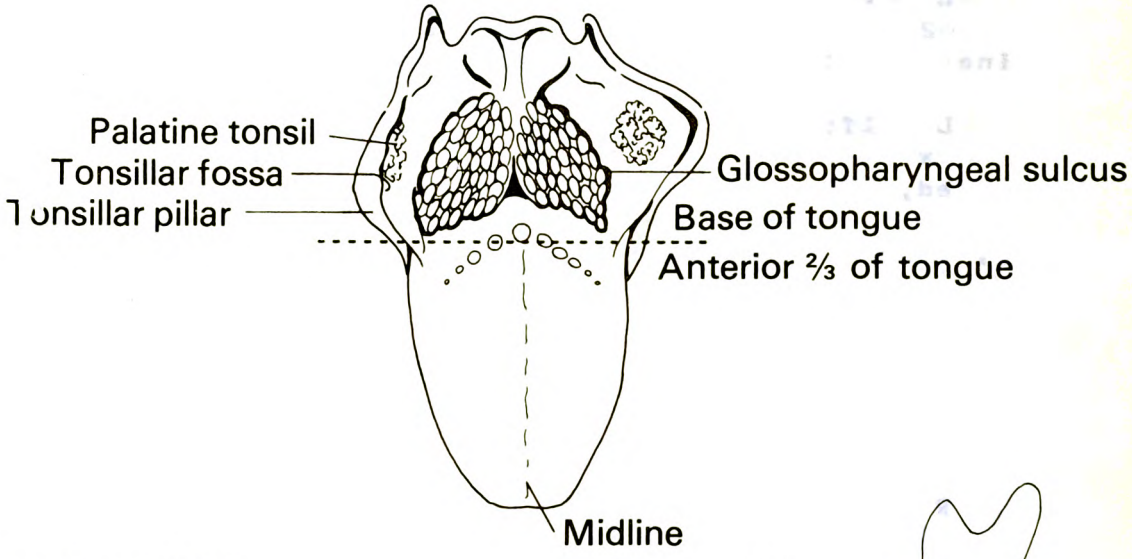
D if extension to:
1
Mandible
Larynx
Hypopharynx
Soft palate, including uvula

D if:
2
Other distant involvement

DISTANT, Lymph Nodes

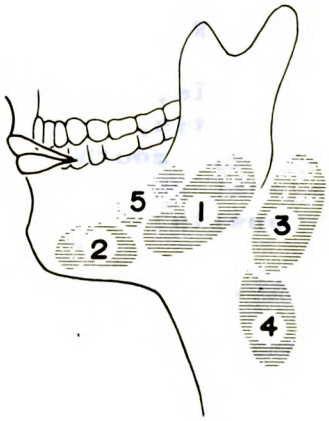
Supraclavicular (transverse cervical)
Other distant nodes

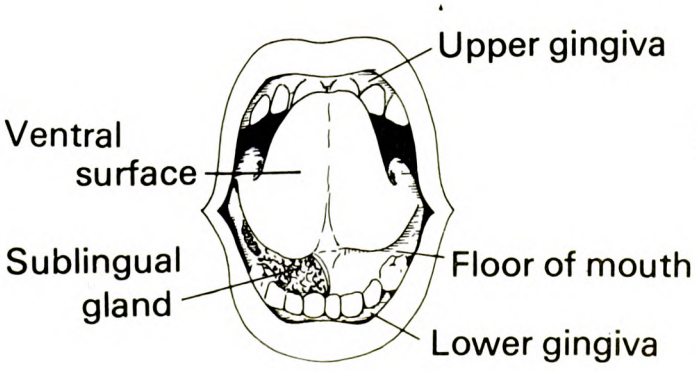
## ANTERIOR ⅔ OF TONGUE

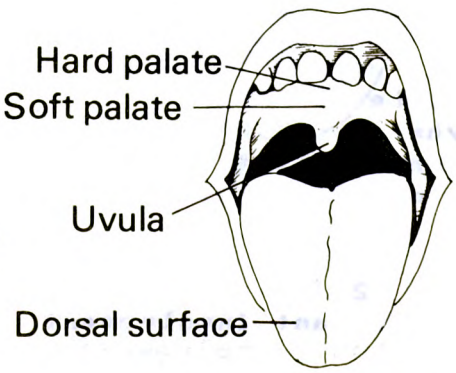



### REGIONAL NODES

1. Submandibular
2. Submental
3. Upper cervical
4. Internal jugular
5. Sublingual



ANTERIOR 2/3 OF TONGUE
411-414

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Confined to anterior 1/3 of tongue on one side with or without invasion of musculature

L if:
2
Midline tumor; tumor has crossed midline

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Floor of mouth
Base of tongue
Sublingual gland

R if:
2
Gingiva, lower

R if:
3
Mandible

**REGIONAL**, Lymph Nodes

Submandibular (submaxillary)
Submental
Internal jugular: subdigastric, supraomohyoid
Upper cervical (including cervical, NOS)
Sublingual

**DISTANT**, Direct Extension or Metastasis

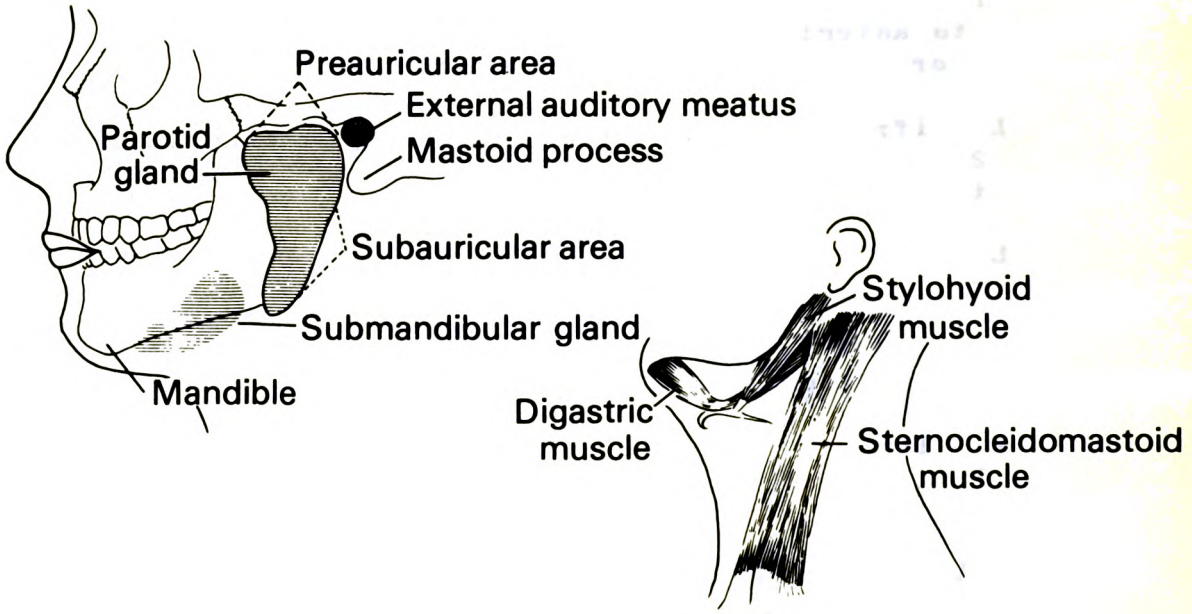
D if extension to:
1
Lateral pharyngeal wall (tonsillar pillars, tonsillar fossae, tonsils)
Soft palate, including uvula
Maxilla

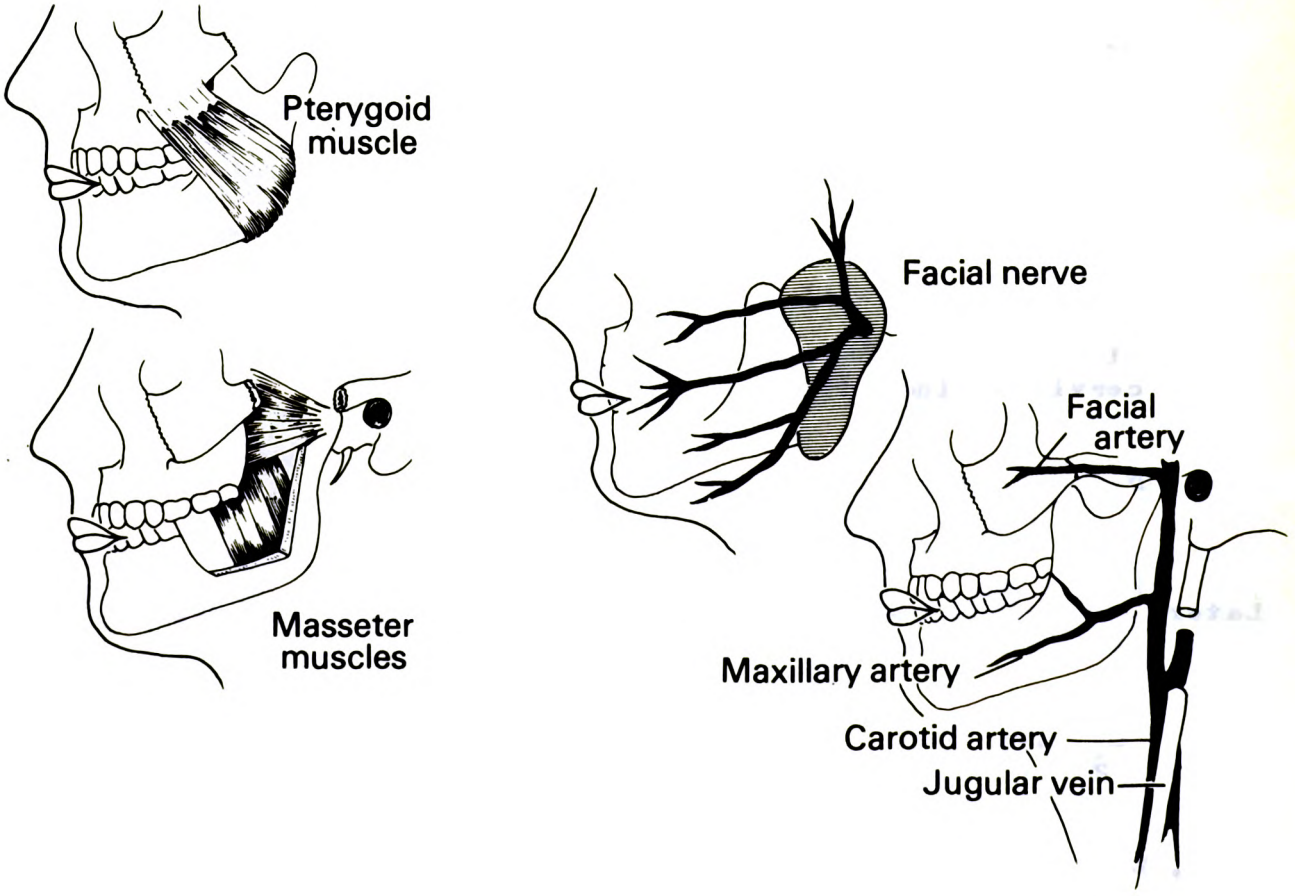
D if:
2
Other distant involvement

**DISTANT**, Lymph Nodes

Supraclavicular (transverse cervical)
Other distant nodes

## PAROTID GLAND



PAROTID GLAND
420

IN SITU; noninvasive

LOCALIZED

Entirely within benign tumor capsule
Substance of parotid gland invaded
Multiple foci but confined to substance of parotid gland

Localized, NOS

REGIONAL, Direct Extension

R 1 if:

Periglandular soft tissue
Nerve(s): facial, auricular, spinal accessory
Skeletal muscle(s): digastric, sternocleidomastoid, masseter, pterygoid, styloid
Periosteum of mandible
Pharyngeal mucosa
Submandibular (submaxillary) gland

R 2 if:

Skin

R 3 if:

Mandible
Major blood vessel(s): carotid artery, facial artery or vein, maxillary artery, jugular vein
Mastoid process
External auditory meatus
Skull

REGIONAL, Lymph Nodes

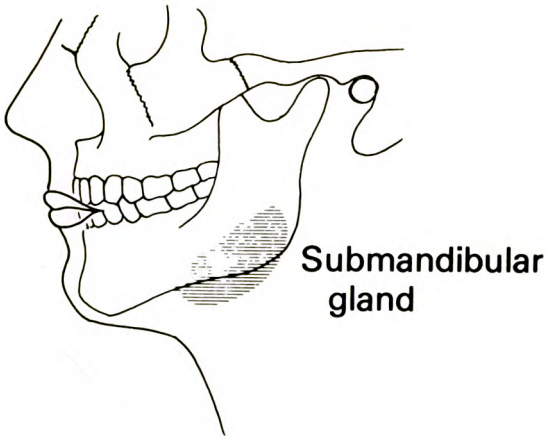
Parotid: intra-parotid, infra-auricular, preauricular
Submandibular (submaxillary)

DISTANT, Direct Extension or Metastasis

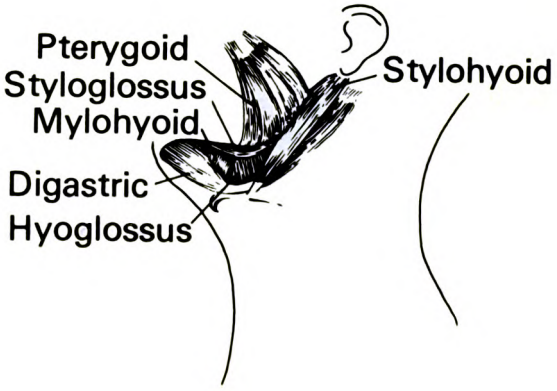
DISTANT, Lymph Nodes

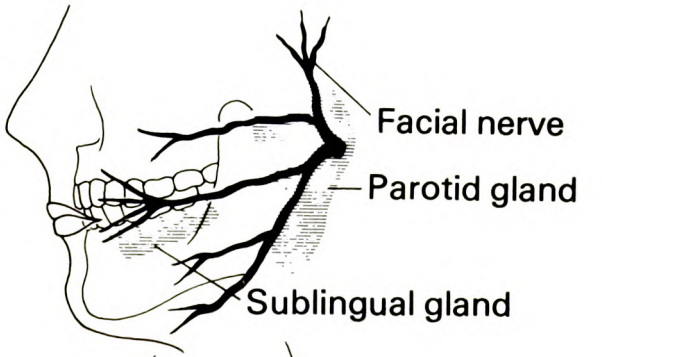
Upper cervical (including cervical, NOS)
Supraclavicular (transverse cervical)
Other distant nodes

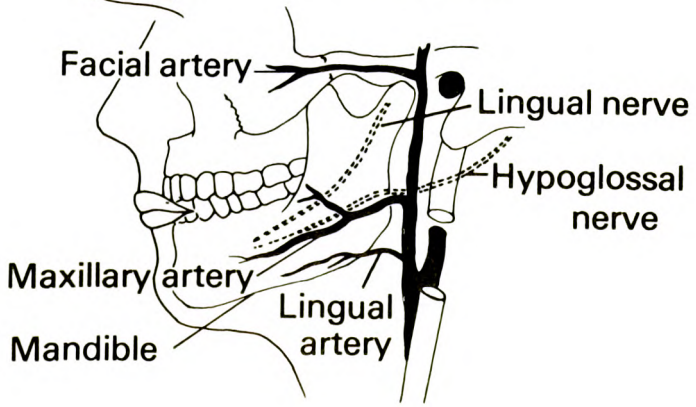
## SUBMANDIBULAR GLAND

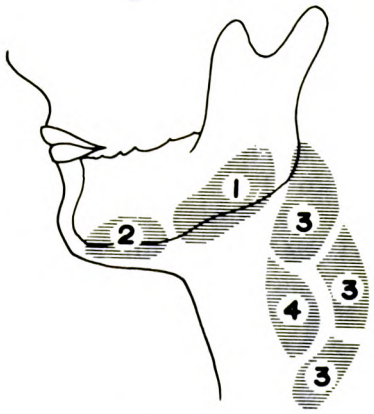



## MUSCLES




## REGIONAL NODES

1. Submandibular
2. Submental
3. Cervical, NOS
4. Upper jugular

SUBMANDIBULAR GLAND
(Submaxillary Gland)
421

**IN SITU;** noninvasive

**LOCALIZED**

Entirely within benign tumor capsule
Substance of parotid gland invaded
Multiple foci but confined to substance of submandibular gland

Localized, NOS

**REGIONAL,** Direct Extension

R1 if:
Periglandular soft tissue
Skeletal muscle(s): digastric, mylohoid, stylohyoid, hyoglossus, styloglossus; pterygoid
Periosteum of mandible
Parotid gland
Sublingual gland

R2 if:
Nerve(s)
Major blood vessel(s): facial artery or vein, maxillary artery
Mandible

**REGIONAL,** Lymph Nodes

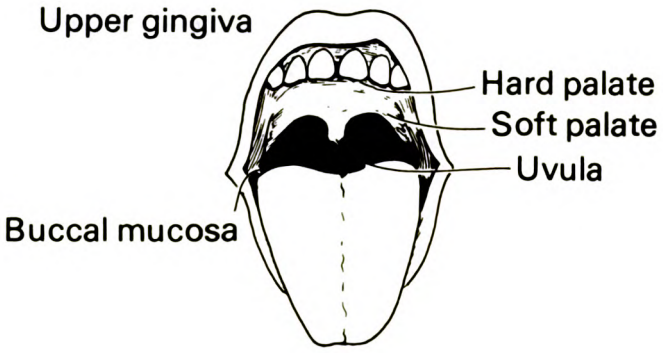
Submental
Submandibular (submaxillary)
Internal jugular (subdigastric)
Upper cervical (including cervical, NOS)

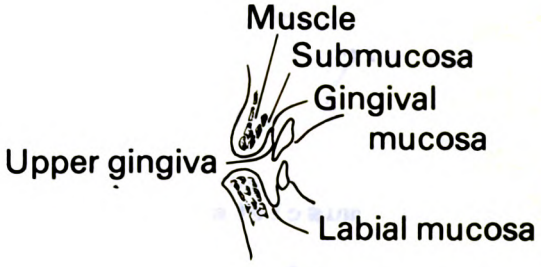
**DISTANT,** Direct Extension or Metastasis

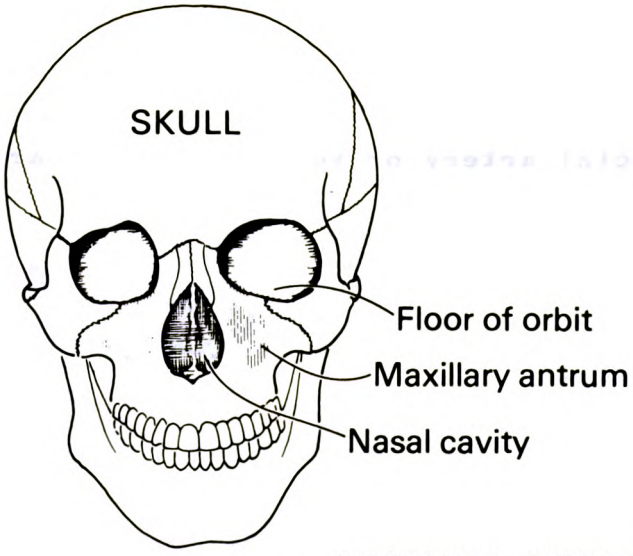
**DISTANT,** Lymph Nodes

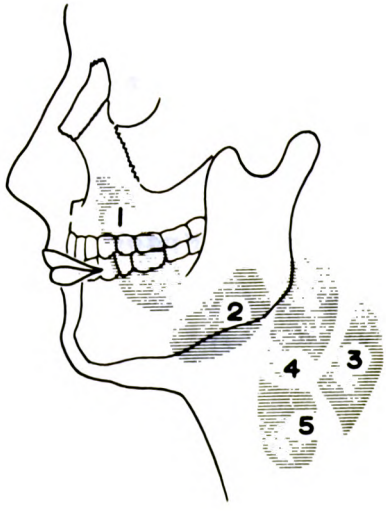
Supraclavicular (transverse cervical)
Other distant nodes

## UPPER GUM (GINGIVA)




REGIONAL NODES

1. Facial
2. Submandibular
3. Retropharyngeal
4. Internal jugular
5. Upper cervical

UPPER GUM (GINGIVA)
430

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Confined to mucosa

L if invading:
2
Lamina propria (mucoperiosteum)

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Maxilla
Hard and/or soft palate
Buccal mucosa (inner cheek)
Labial mucosa, upper lip

R if:
2
Lateral pharyngeal wall (tonsillar pillars, tonsillar fossae, tonsils)
Soft tissue of face

**REGIONAL**, Lymph Nodes

Facial: mandibular
Submandibular (submaxillary)
Retropharyngeal
Internal jugular
Upper cervical (including cervical, NOS)

**DISTANT**, Direct Extension or Metastasis

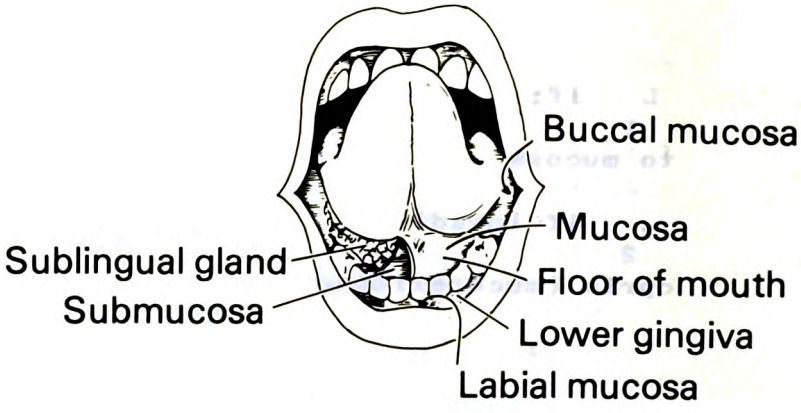
D if extension to:
1
Skin
Nasal cavity
Maxillary antrum (sinus)
Skull, including floor of orbit

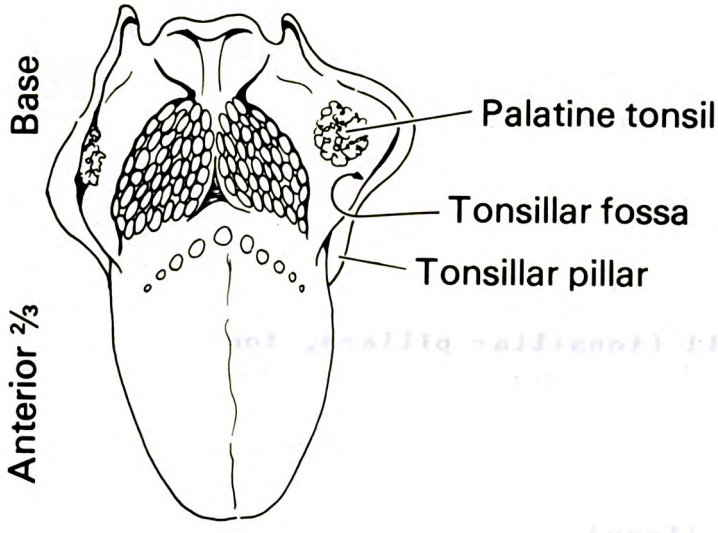
D if:
2
Other distant involvement

**DISTANT**, Lymph Nodes

Supraclavicular (transverse cervical)
Other distant nodes

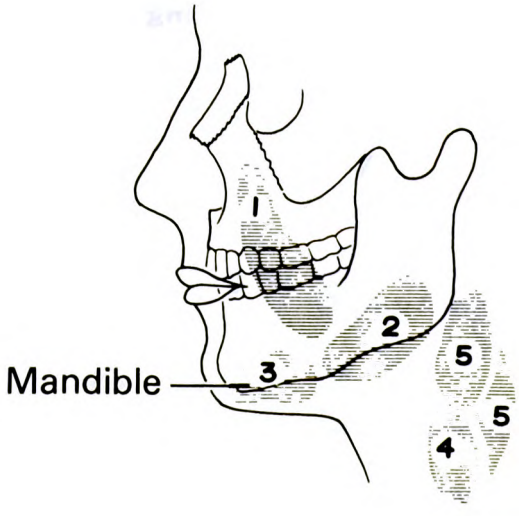
## LOWER GUM (GINGIVA)




## REGIONAL NODES

1. Facial
2. Submandibular
3. Submental
4. Internal jugular
5. Upper cervical



LOWER GUM (GINGIVA)
AND RETROMOLAR TRIGONE
431, 456

IN SITU; noninvasive

LOCALIZED

L if:
1
Confined to mucosa

L if invading:
2
Lamina propria (mucoperiosteum)

L if:
x
Localized, NOS

REGIONAL, Direct Extension

R if:
1
Mandible; periosteum of mandible
Floor of mouth
Buccal mucosa (inner cheek)
Labial mucosa, lower lip
Tongue

R if:
2
Lateral pharyngeal wall (tonsillar pillars, tonsillar fossae, tonsils)
Soft palate, including uvula
Soft tissue of face

REGIONAL, Lymph Nodes

Facial: mandibular
Submandibular (submaxillary)
Submental
Internal jugular: subdigastric, supraomohyoid
Upper cervical (including cervical, NOS)

DISTANT, Direct Extension or Metastasis

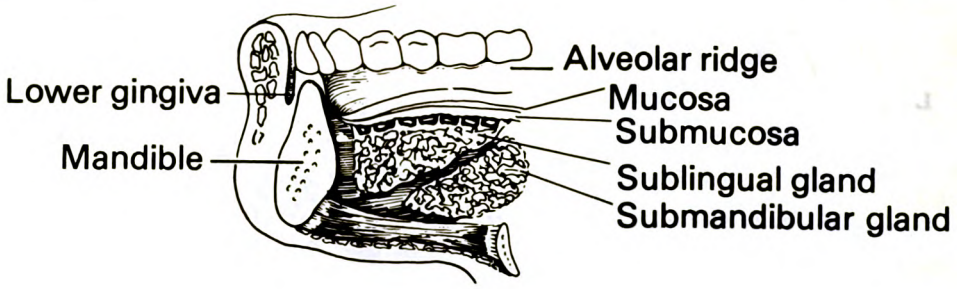
D if extension to:
1
Skin
Skull

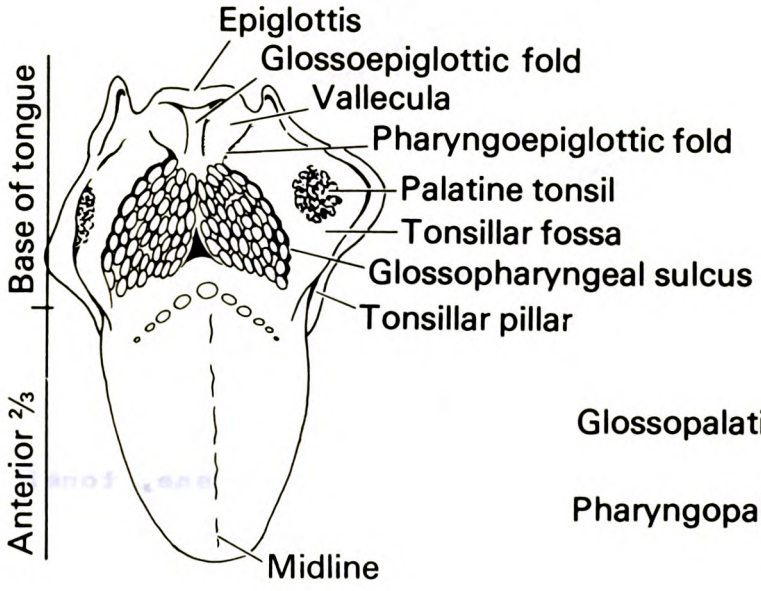
D if:
2
Other distant involvement

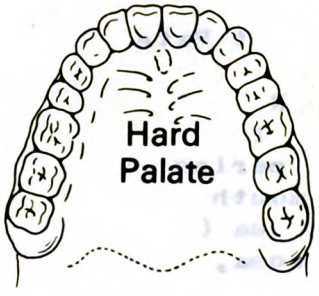
DISTANT, Lymph Nodes

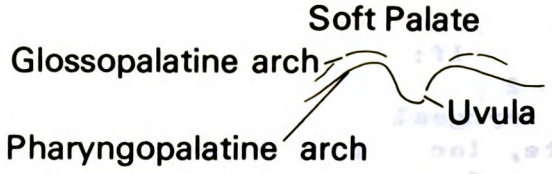
Supraclavicular (transverse cervical)
Other distant nodes

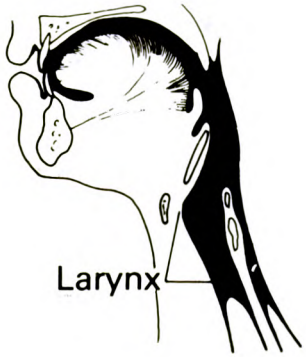
## FLOOR OF MOUTH

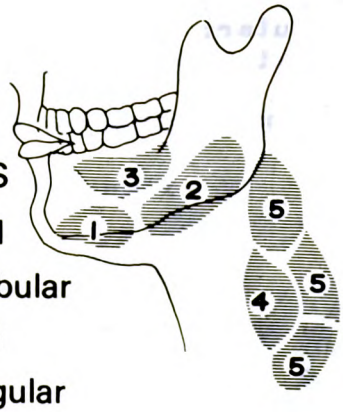



REGIONAL NODES

1. Submental
2. Submandibular
3. Sublingual
4. Internal jugular
5. Cervical, NOS

FLOOR OF MOUTH
440, 441, 448, 449

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Confined to mucosa on one side

L if:
2
Confined to one side:
Submucosa invaded
Musculature invaded

L if:
3
Midline tumor; tumor has crossed midline

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Gingiva, lower
Anterior 2/3 of tongue
Submandibular (submaxillary) gland(s)
Sublingual gland
Periosteum of mandible

R if:
2
Mandible
Base of tongue
Vallecula, including pharyngoepiglottic and glossoepiglottic folds

R if:
3
Epiglottis, pharyngeal (lingual) surface
Lateral pharyngeal wall (tonsillar pillars, tonsillar fossae, tonsils)
Underlying soft tissues

R if:
4
Skin

FLOOR OF MOUTH
440-441, 448-449

REGIONAL, Lymph Nodes

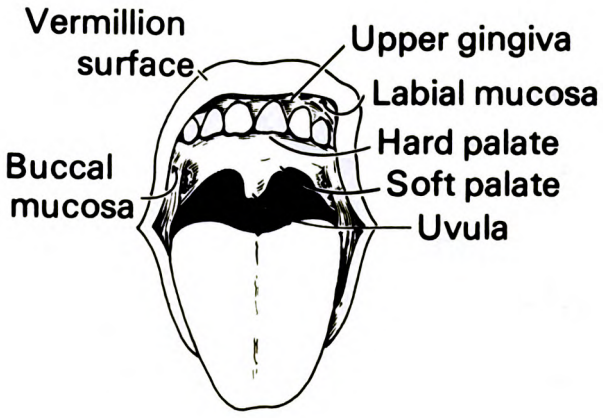
Submandibular (submaxillary)
Submental
Sublingual
Internal jugular: subdigastric, supraomohyoid
Upper cervical (including cervical, NOS)

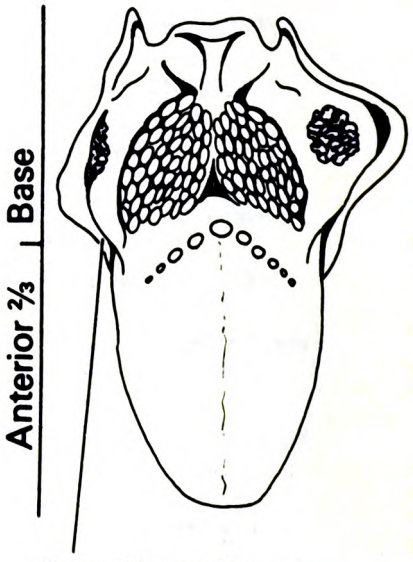
DISTANT, Direct Extension or Metastasis

DISTANT, Lymph Nodes

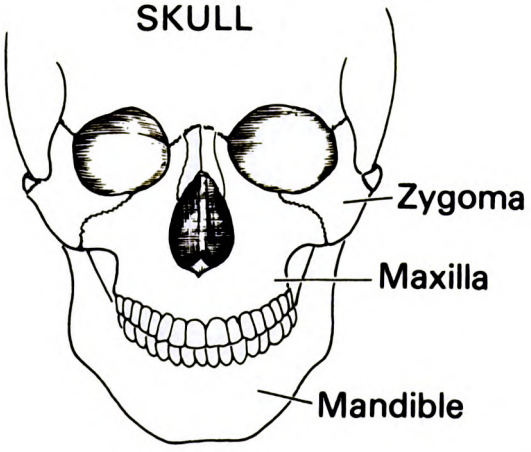
Supraclavicular (transverse cervical)
Other distant nodes

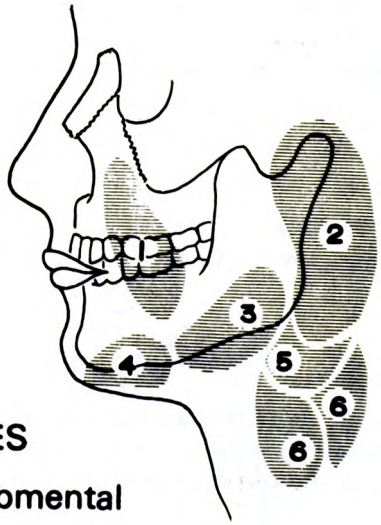
## CHEEK (BUCCAL) MUCOSA




SKULL




REGIONAL NODES

1. Facial
2. Parotid
3. Submandibular
4. Submental
5. Internal jugular
6. Upper cervical

CHEEK (Buccal) MUCOSA
VESTIBULE OF MOUTH
450, 451

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Confined to mucosa
Submucosa invaded
Muscularis

Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Gingiva
Lip(s)
Lateral pharyngeal wall (tonsillar pillars, tonsillar fossae, tonsils)

R if:
2
Skin

**REGIONAL**, Lymph Nodes

Facial: buccinator, mandibular
Parotid: preauricular, infra-auricular
Submandibular (submaxillary)
Internal jugular: subdigastric
Upper cervical (including cervical, NOS)

**DISTANT**, Direct Extension or Metastasis

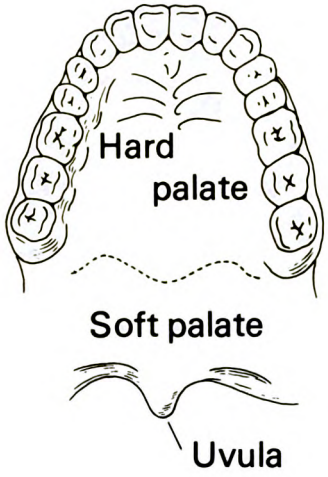
D if extension to:
1
Base or anterior 2/3 of tongue
Hard or soft palate
Bone: maxilla, mandible, skull

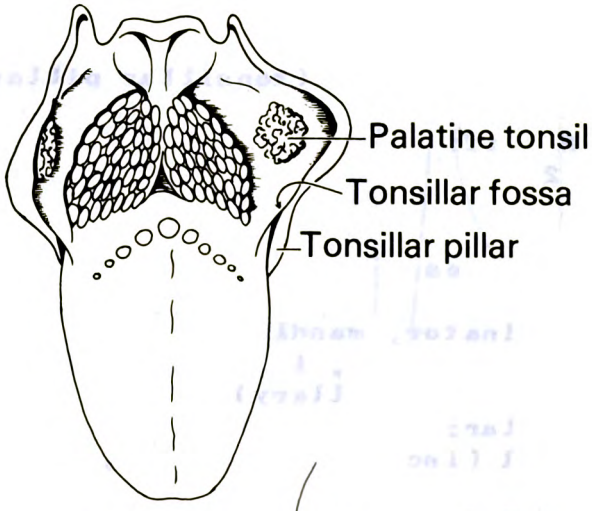
D if:
2
Other distant involvement

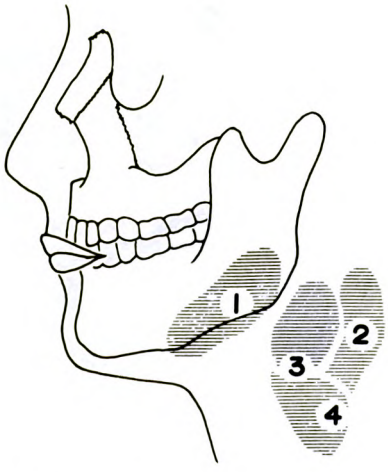
**DISTANT**, Lymph Nodes

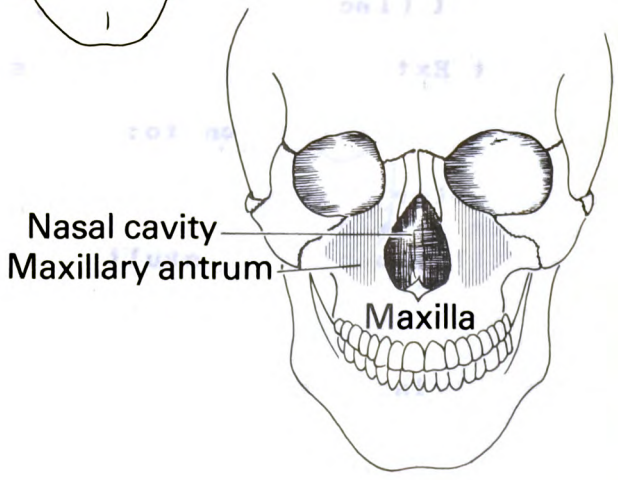
Supraclavicular (transverse cervical)
Other distant nodes

## HARD PALATE






REGIONAL NODES

1. Submandibular
2. Retropharyngeal
3. Internal jugular
4. Cervical, NOS

HARD PALATE
452

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Confined to mucosa on one side

L if:
2
Midline tumor; tumor has crossed midline

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Soft palate, including uvula
Gingiva, upper
Palatine bone
Maxilla

R if:
2
Buccal mucosa (inner cheek)

**REGIONAL**, Lymph Nodes

Submandibular (submaxillary)
Retropharyngeal
Internal jugular: subdigastric
Upper cervical (including cervical, NOS)

**DISTANT**, Direct Extension or Metastasis

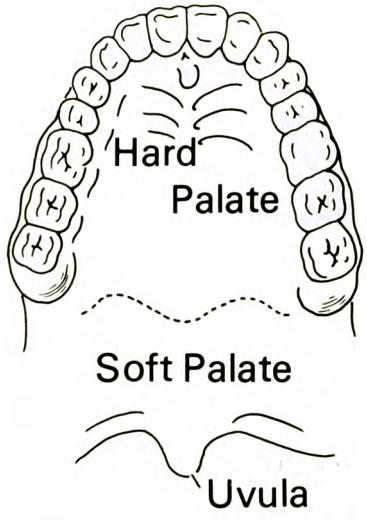
D if extension to:
1
Nasal cavity; floor of nose
Maxillary antrum (sinus)
Nasopharynx

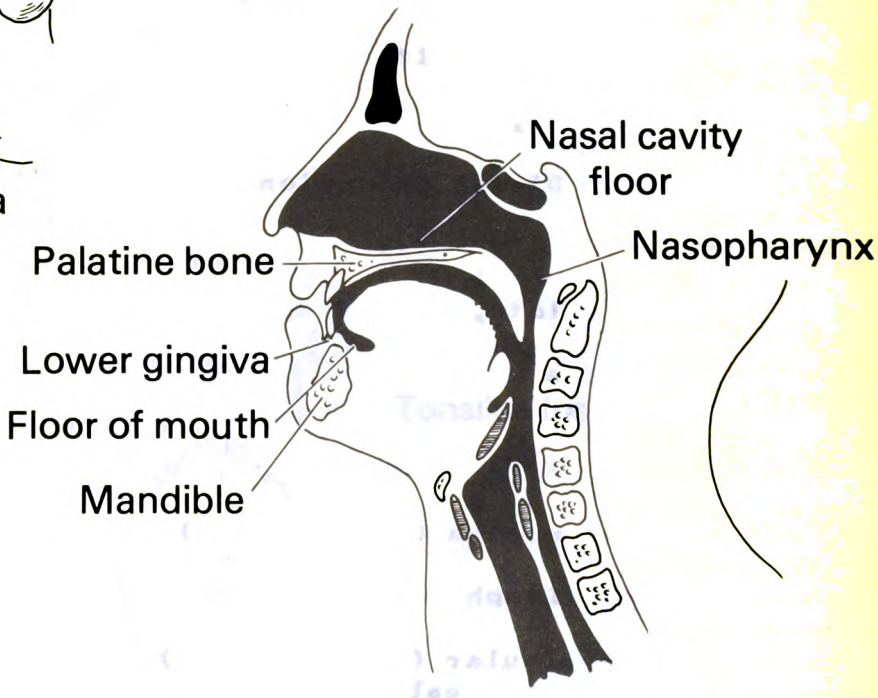
D if:
2
Other distant involvement

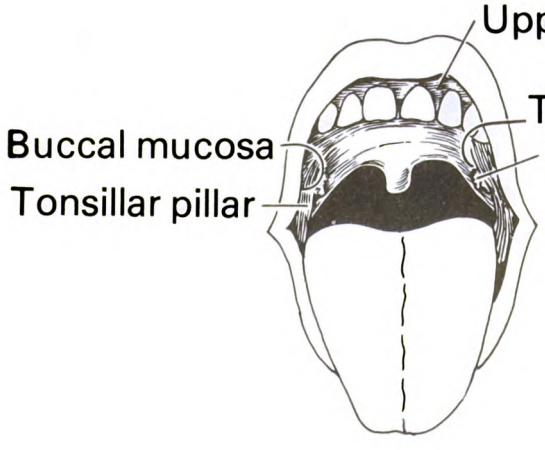
**DISTANT**, Lymph Nodes

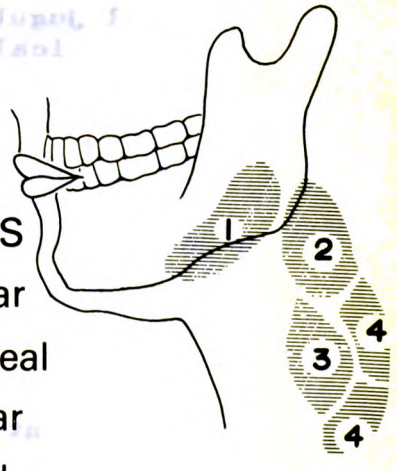
Supraclavicular (transverse cervical)
Other distant nodes

# SOFT PALATE AND UVULA




REGIONAL NODES

1. Submandibular
2. Retropharyngeal
3. Internal jugular
4. Upper cervical

SOFT PALATE
AND UVULA
453-454

IN SITU; noninvasive

LOCALIZED

L if:
1
Confined to mucosa on one side

L if:
2
Submucosa and/or musculature invaded on one side

L if:
3
Midline tumor; tumor has crossed midline

L if:
x
Localized, NOS

REGIONAL, Direct Extension

R if:
1
Hard palate, mucosa
Gingiva, upper
Lateral pharyngeal wall (tonsillar pillars, tonsillar fossae, tonsils)

R if:
2
Buccal mucosa (inner cheek)
Nasal cavity floor

REGIONAL, Lymph Nodes

Submandibular (submaxillary)
Retropharyngeal
Internal jugular: subdigastric
Upper cervical (including cervical, NOS)

SOFT PALATE
AND UVULA
453-454

DISTANT, Direct Extension or Metastasis

D1 if extension to:

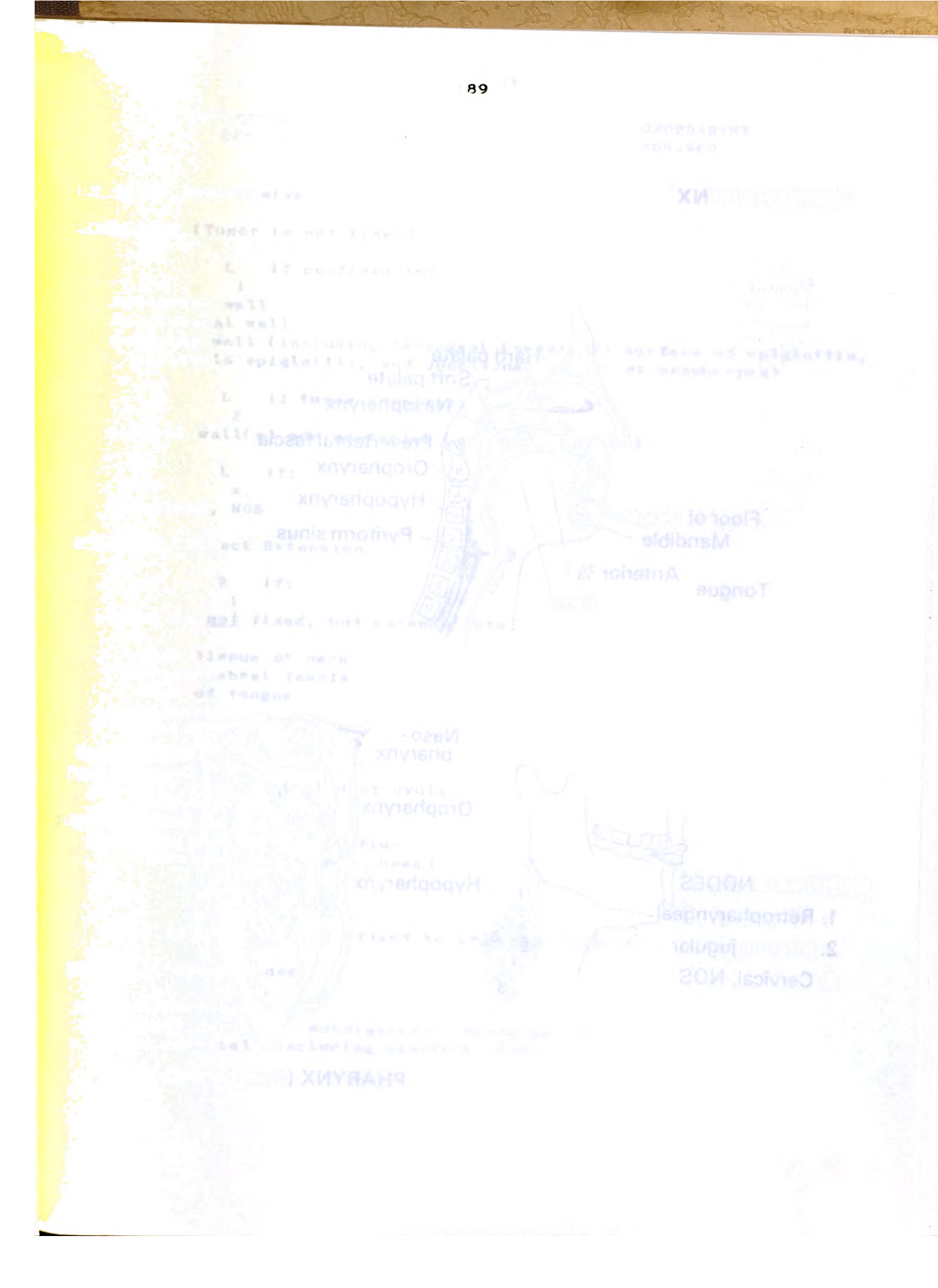
Tongue
Nasopharynx
Palatine bone
Maxilla
Maxillary antrum (sinus)
Mandible

D2 if:

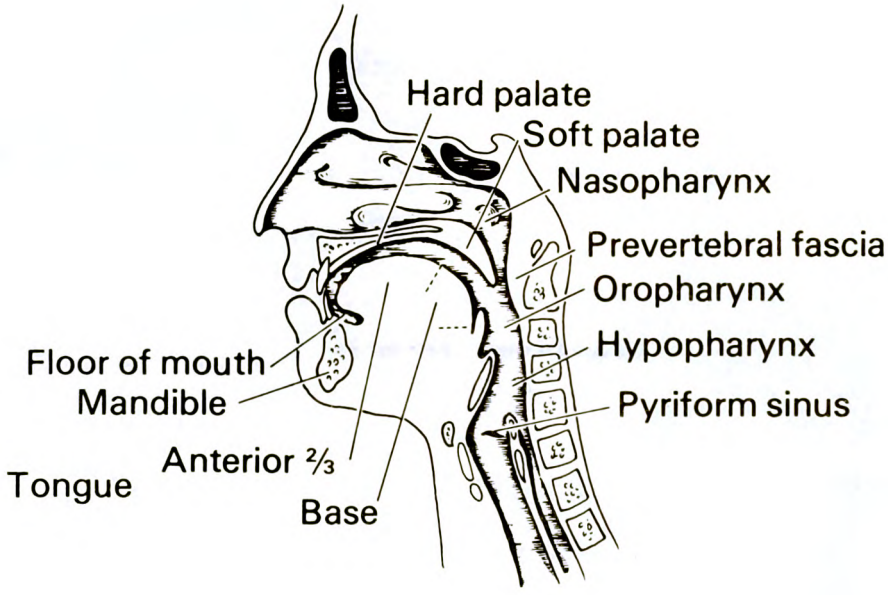
Other distant involvement

DISTANT, Lymph Nodes

Supraclavicular (transverse cervical)
Other distant nodes

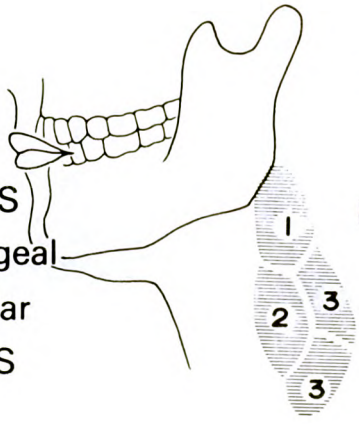


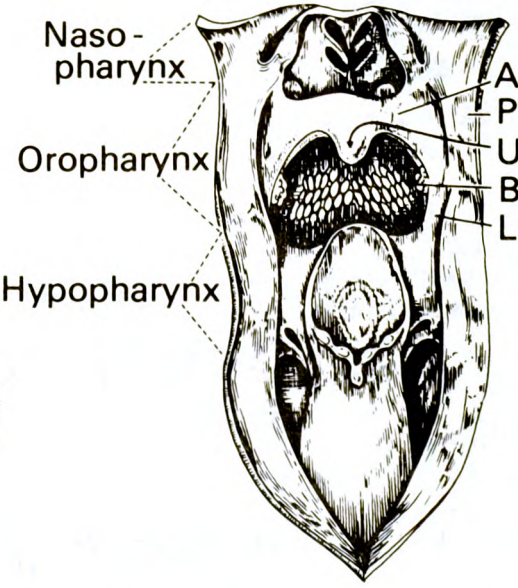
## OROPHARYNX




REGIONAL NODES

1. Retropharyngeal
2. Internal jugular
3. Cervical, NOS




PHARYNX (from behind)

**IN SITU**; noninvasive

**LOCALIZED** (Tumor is not fixed)

L if confined to:
1
Posterior wall
One lateral wall
Anterior wall (including laryngeal (anterior) surface of epiglottis, vallecula epiglottis, and junctional region of oropharynx)

L if tumor involves:
2
Lateral wall(s) and posterior (or anterior) wall

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Tumor is not fixed, but extends into:

Soft tissue of neck
Prevertebral fascia
Base of tongue
Larynx
Pyriform sinus
Hypopharynx, NOS

Soft palate, including uvula
Nasopharynx
Floor of mouth
Gum (gingiva), posterior
Buccal mucosa (inner cheek)

R if:
2
Tumor is described as "fixed to adjacent tissues"

**REGIONAL**, Lymph Nodes

Retropharyngeal
Internal jugular: subdigastric, supraomohyoid
Upper cervical (including cervical, NOS)

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Both lateral walls involved via soft palate or base of tongue
Anterior 2/3 of tongue
Hard palate
Mandible
Parotid gland

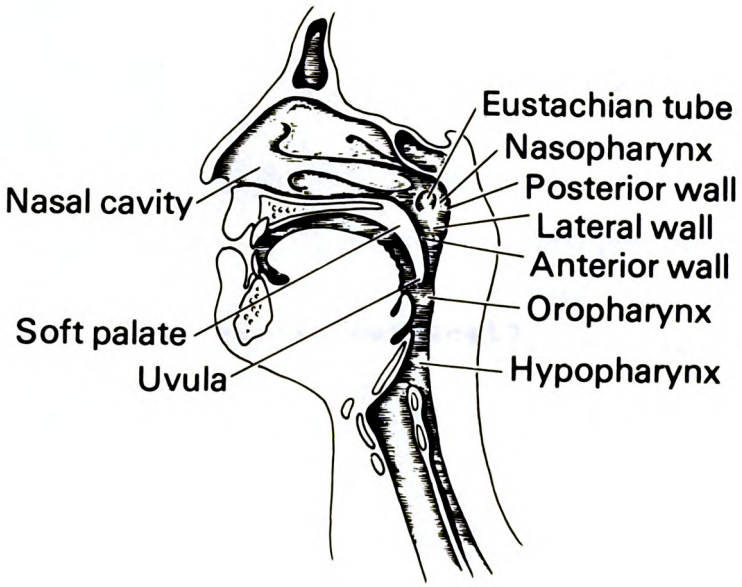
D2 if:

Other distant involvement

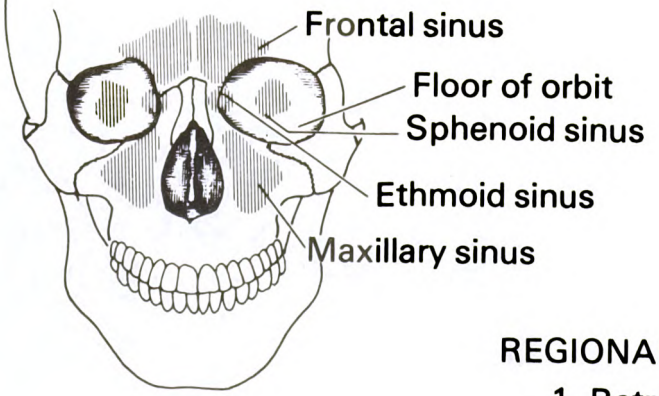
DISTANT, Lymph Nodes

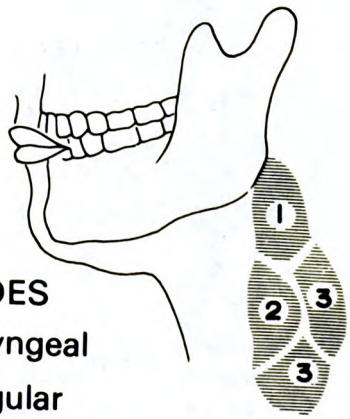
Submandibular
Supraclavicular (transverse cervical)
Other distant nodes

## NASOPHARYNX




SKULL




REGIONAL NODES

1. Retropharyngeal
2. Internal jugular
3. Cervical, NOS

IN SITU; noninvasive

LOCALIZED (Tumor is not fixed)

L if confined to:
1
Posterior superior wall (vault)
One lateral wall (including aryepiglottic fold, NOS)

L if tumor involves:
2
Posterior superior wall (vault) and lateral wall(s)
Lateral wall into eustachian tube/ middle ear

L if:
x
Localized, NOS

REGIONAL, Direct Extension

R if:
1
Tumor is not fixed, but extends into:
Oropharynx; nasal cavity
Skull, including floor of orbit
Pterygopalatine fossa
Soft palate, including uvula

R if:
2
Tumor is described as "fixed to adjacent tissues"

REGIONAL, Lymph Nodes

Retropharyngeal
Internal jugular
Upper cervical (including cervical, NOS)

DISTANT, Direct Extension or Metastasis

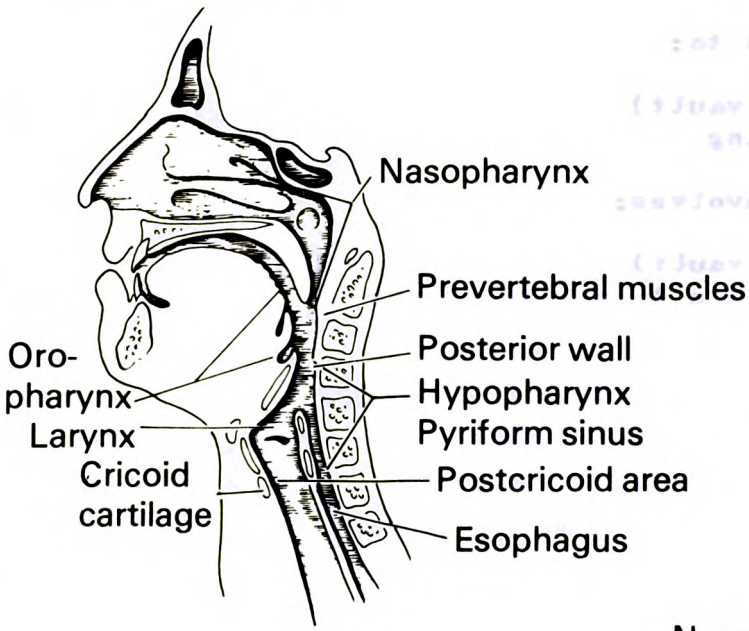
D if extension to:
1
Brain, including cranial nerves
Accessory sinus: maxillary, sphenoid, ethmoid, frontal
Hard palate
Hypopharynx
Soft tissues of neck

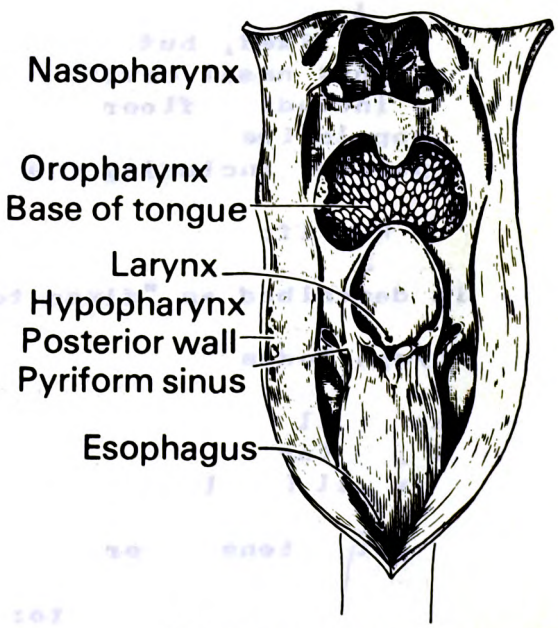
D if:
2
Other distant involvement

DISTANT, Lymph Nodes

Supraclavicular (transverse cervical)
Submandibular
Other distant nodes

## HYPOPHARYNX

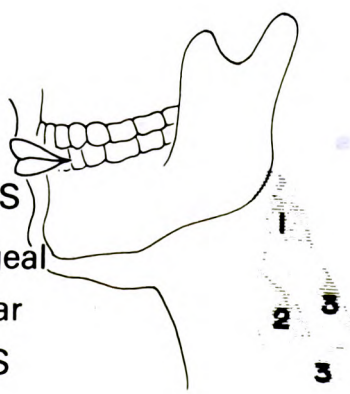



PHARYNX (posterior view)

REGIONAL NODES

1. Retropharyngeal
2. Internal jugular
3. Cervical, NOS



IN SITU; noninvasive

LOCALIZED (Tumor is not fixed)

L if confined to:
1

Pyriform sinus
Postcricoid area
Posterior pharyngeal wall

L if tumor involves:
2

Pyriform sinus and postcricoid area
Pyriform sinus and posterior pharyngeal wall
Postcricoid area and posterior pharyngeal wall
Pyriform sinus, postcricoid area and posterior pharyngeal wall

L if:
x

Localized, NOS

REGIONAL, Direct Extension

R if:
1

Tumor is not fixed, but extends into:
Oropharynx; larynx
Soft tissues of neck
Prevertebral muscle(s)
Upper esophagus

R if:
2

Tumor is described as "fixed to adjacent tissues"

REGIONAL, Lymph Nodes

Retropharyngeal
Internal jugular: subdigastric, supraomohyoid
Upper cervical (including cervical, NOS)

DISTANT, Direct Extension or Metastasis

D if extension to:
1

Nasopharynx
Base of tongue
Floor of mouth

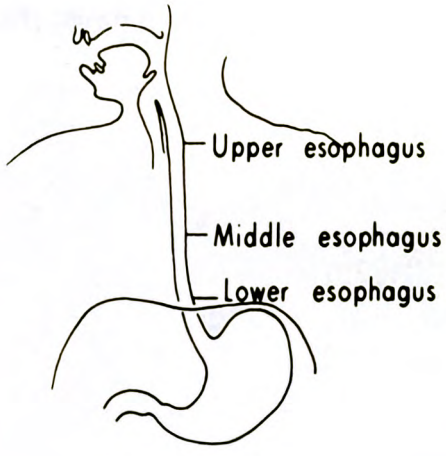
D if:
2

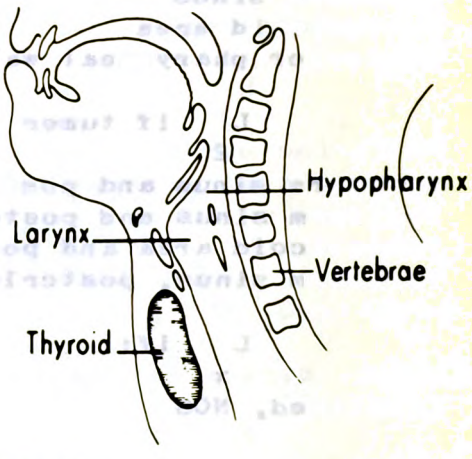
Other distant involvement

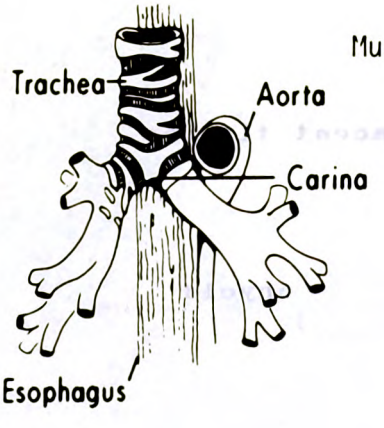
DISTANT, Lymph Nodes

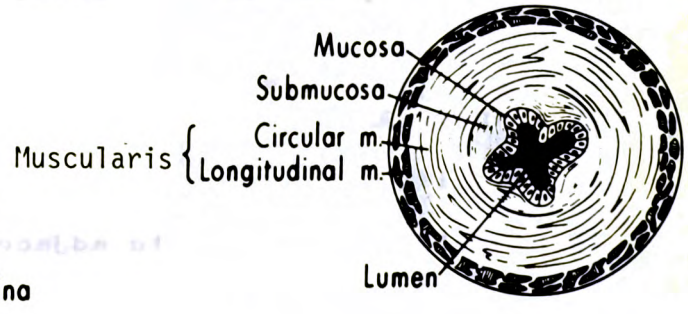
Supraclavicular (transverse cervical)
Other distant nodes

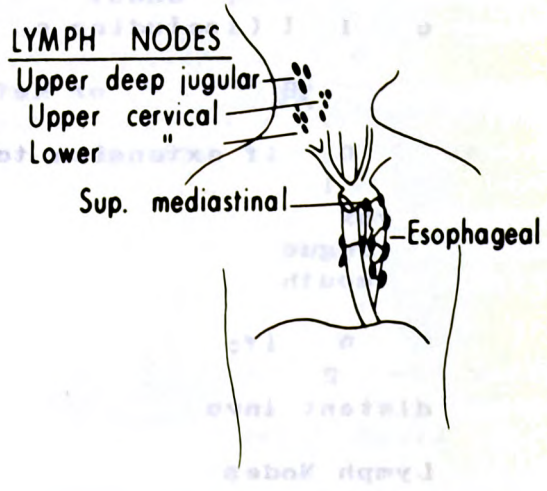
# UPPER OR CERVICAL ESOPHAGUS



CERVICAL OR UPPER ESOPHAGUS
500, 503

**IN SITU**: noninvasive

**LOCALIZED**

L if confined to:
1
Mucosa of upper esophagus
Mucosa but extends to middle esophagus

L if tumor invades:
2
Muscularis

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Adventitia and/or soft tissues of neck
Major blood vessel(s): carotid artery, subclavian artery, jugular vein
Thyroid gland
Esophagus is described as "fixed"

R if:
2
Hypopharynx; larynx
Trachea, including carina
Cervical vertebra(e)

**REGIONAL**, Lymph Nodes

Paraesophageal
Internal jugular
Anterior deep cervical: laterotracheal (recurrent)
Upper cervical (including cervical, NOS)

**DISTANT**, Direct Extension or Metastasis

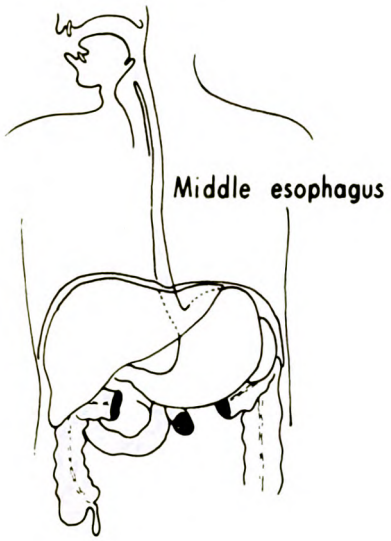
D if extension to:
1
Main stem bronchus
Lung and/or pleura

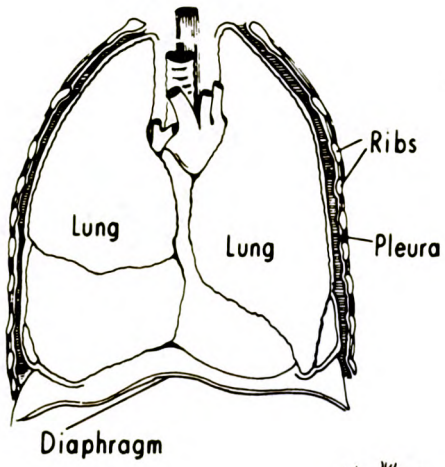
D if:
2
Other distant involvement

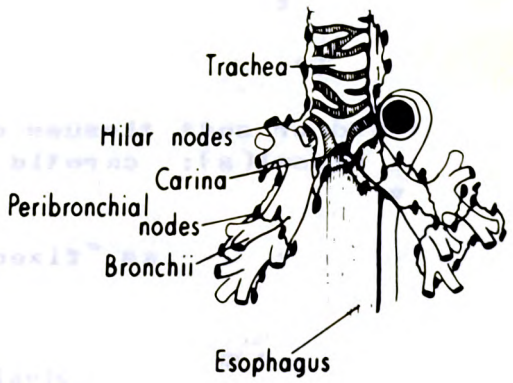
**DISTANT**, Lymph Nodes

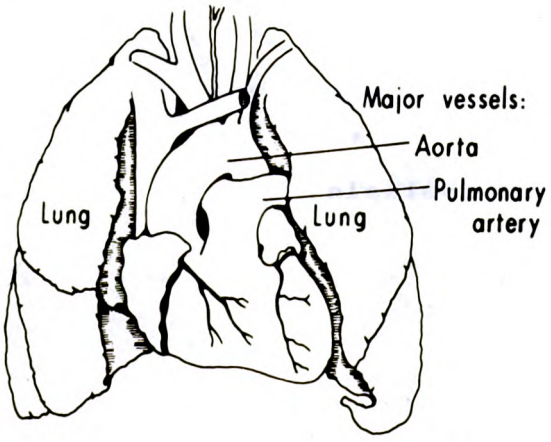
Posterior mediastinal
Supraclavicular (transverse cervical)
Other distant nodes

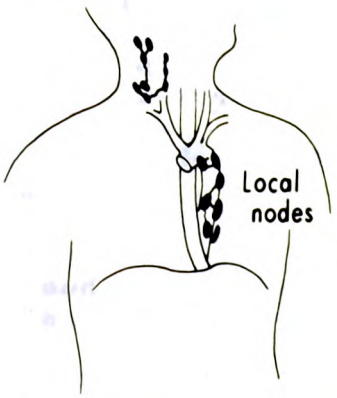
# MIDDLE OR THORACIC ESOPHAGUS





THORACIC OR MIDDLE
ESOPHAGUS
501, 504

IN SITU; noninvasive

LOCALIZED

L if confined to:
1
Mucosa of middle esophagus
Mucosa but extends to upper and/or lower esophagus

L if tumor involves:
2
Muscularis

L if:
x
Localized, NOS

REGIONAL, Direct Extension

R if:
1
Adventitia and/or soft tissues
Major blood vessel(s): aorta, pulmonary artery or vein, vena cava
Trachea
Carina
Main stem bronchus
Esophagus is described as "fixed"

R if:
2
Lung via bronchus
Pleura
Pericardium
Mediastinal structure(s), NOS
Rib(s)
Thoracic vertebra(e)
Diaphragm

REGIONAL, Lymph Nodes

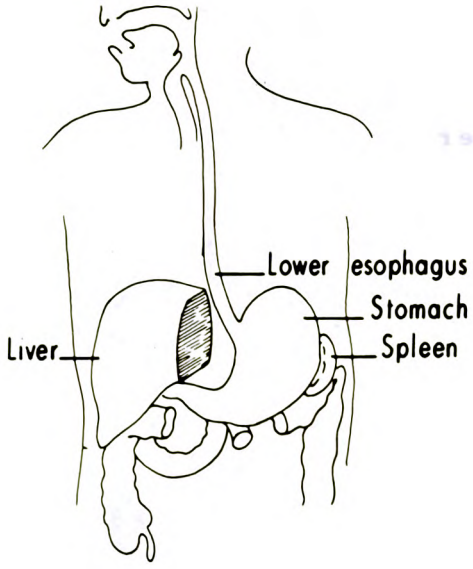
Paraesophageal
Tracheobronchial: peritracheal, carinal (bifurcation), hilar (pulmonary roots)
Posterior mediastinal
Internal jugular
Left gastric: cardiac, lesser curvature
Upper cervical (including cervical, NOS)

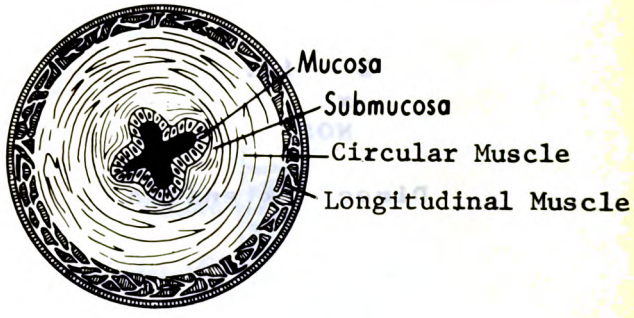
DISTANT, Direct Extension or Metastasis

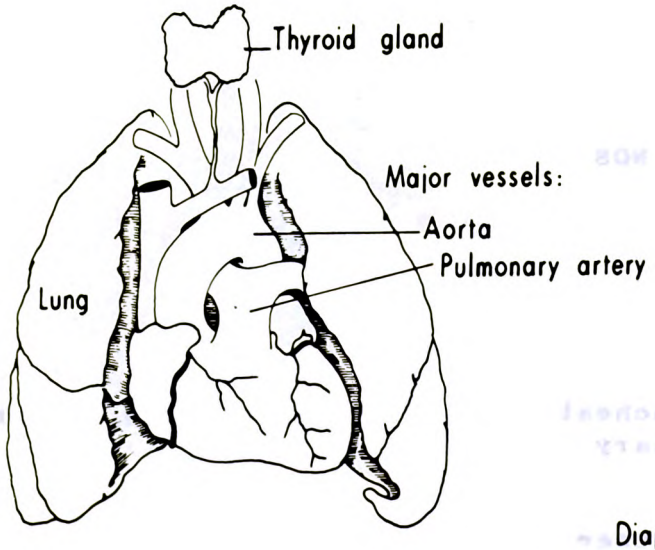
DISTANT, Lymph Nodes

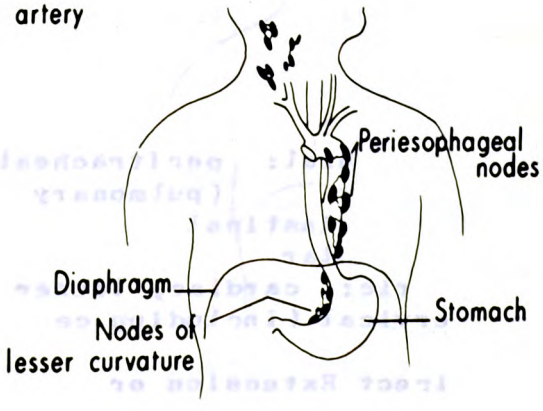
Supraclavicular (transverse cervical)
Other distant nodes

# LOWER OR DISTAL ESOPHAGUS



ABDOMINAL OR LOWER
ESOPHAGUS
502, 505

**IN SITU**; noninvasive

**LOCALIZED**

L if confined to:
1
Mucosa of lower esophagus
Mucosa but extends to middle esophagus

L if tumor involves:
2
Muscularis

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Adventitia and/or soft tissues
Esophagus is described as "fixed"

R if:
2
Diaphragm
Cardia of stomach
Major blood vessel(s): aorta, gastric artery or vein, vena cava

**REGIONAL**, Lymph Nodes

Paraesophageal
Left gastric: cardiac, lesser curvature, perigastric, NOS
Posterior mediastinal

**DISTANT**, Direct Extension or Metastasis

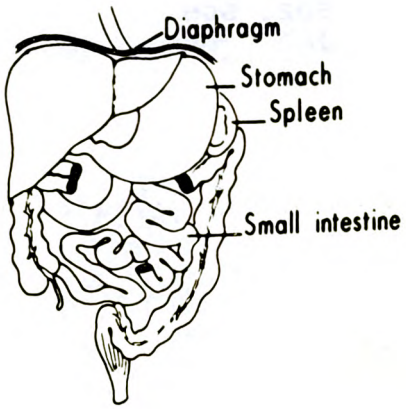
D if:
1
"Diaphragm is fixed" (indicates phrenic nerve involved by tumor)

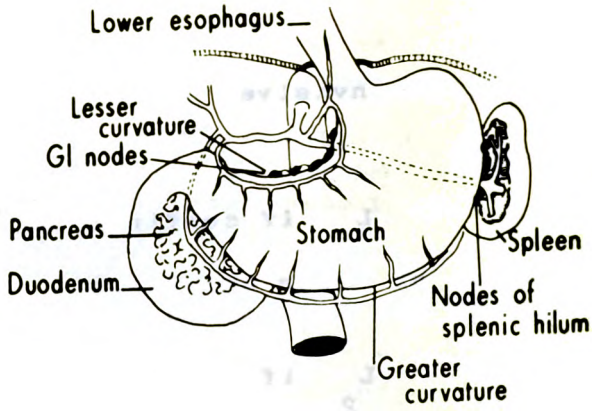
D if:
2
Other distant involvement

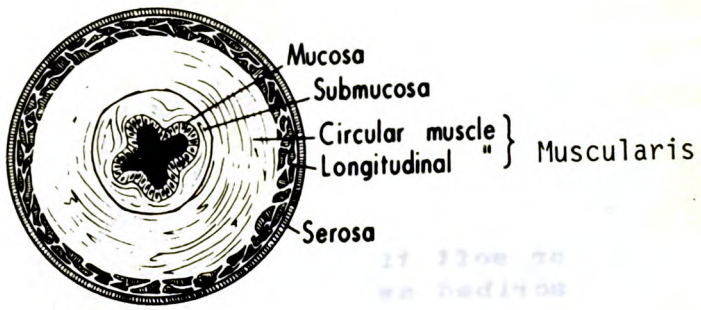
**DISTANT**, Lymph Nodes

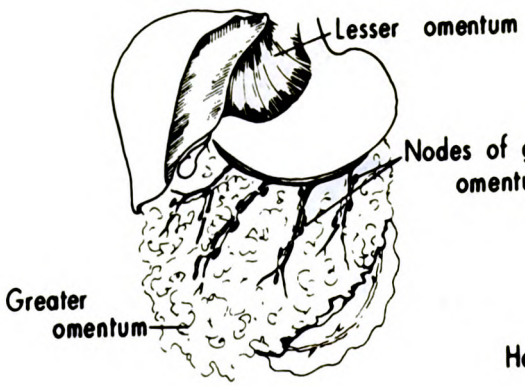
Celiac
Para-aortic
Other distant nodes

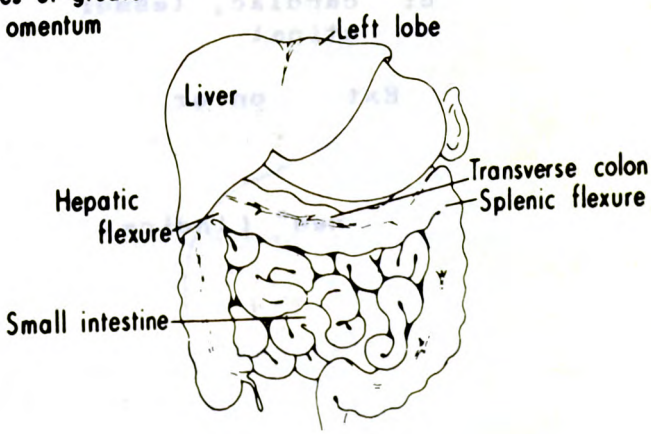
## STOMACH


Diaphragm
Stomach
Spleen
Small intestine


Lower esophagus
Lesser curvature
GI nodes
Pancreas
Duodenum
Stomach
Spleen
Nodes of splenic hilum
Greater curvature


Mucosa
Submucosa
Circular muscle
Longitudinal "
Muscularis
Serosa


Lesser omentum
Nodes of greater omentum
Greater omentum


Left lobe
Liver
Transverse colon
Splenic flexure
Hepatic flexure
Small intestine

STOMACH (excluding cardioesophageal junction)
510-516, 518-519

**IN SITU**; noninvasive

**LOCALIZED**

L if: 1
Confined to mucosa (lamina propria or muscularis mucosae; intramucosal)

L if: 2
Submucosa invaded (thru muscularis mucosae)
Stalk invaded (if polyp)
Superficial invasion

L if: 3
Muscularis propria invaded
Invasion through muscularis propria
Subserosal tissue invaded (including extension through the wall, NOS)

L if: 4
Implants inside the stomach

L if: x
Localized, NOS

**REGIONAL**, Direct Extension

R if extension to: 1
Perigastric fat
Lesser omentum
Ligaments: gastrocolic, gastrohepatic, gastrosplenic
Gastric artery

R if: 2
Invasion of (through) serosa*
Diffuse involvement of entire thickness of stomach wall (linitis plastica)

R if extension to: 3
Esophagus (intraluminal)
Duodenum (intraluminal)

R if extension to: 4
Spleen
Omentum (greater)
Transverse colon (including hepatic and splenic flexures)
Diaphragm

*Invasion of serosa may be considered localized in historical comparisons.

STOMACH (excluding cardioesophageal junction) 510-516, 518-519

R 5 if extension to:

Esophagus via serosa
Duodenum via serosa
Liver
Pancreas
Jejunum, ileum

REGIONAL, Lymph Nodes

Inferior gastric:

Gastrocolic
Gastroepiploic, right or NOS
Greater curvature
Greater omentum
Infrapyloric
Pyloric
Subpyloric

Splenic hilar:

Left gastroepiploic
Pancreaticolienal
Peripancreatic
Splenic

Superior gastric:

Cardiac
Cardioesophageal
Gastrohepatic
Left gastric
Lesser curvature
Lesser omentum
Paracardial

Perigastric, NOS

Nodule(s) in perigastric fat

DISTANT, Direct Extension or Metastasis

D 1 if extension to:

Left Kidney
Adrenal gland(s)
Retroperitoneum
Abdominal wall
Ovary (Krukenberg tumor)

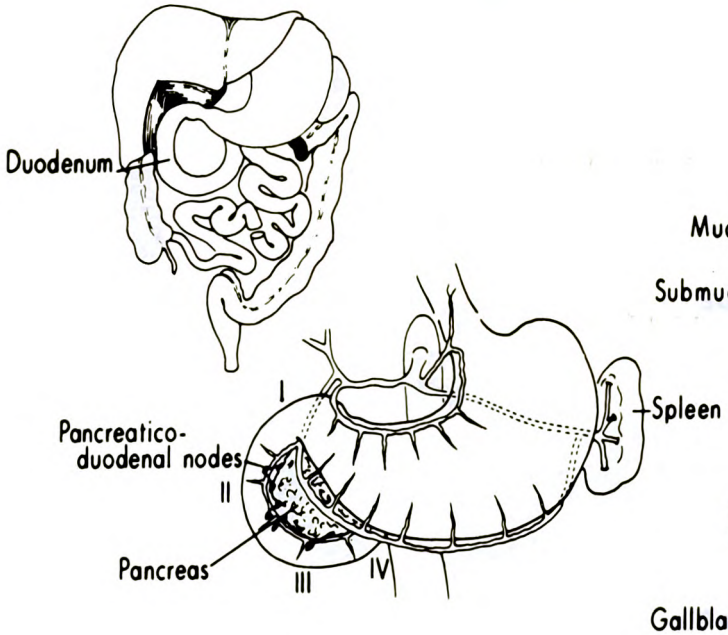
D 2 if:

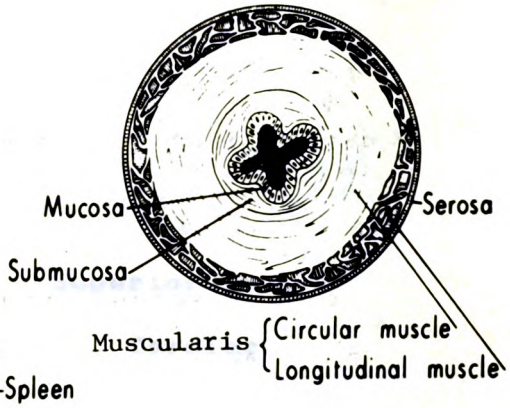
Other distant involvement

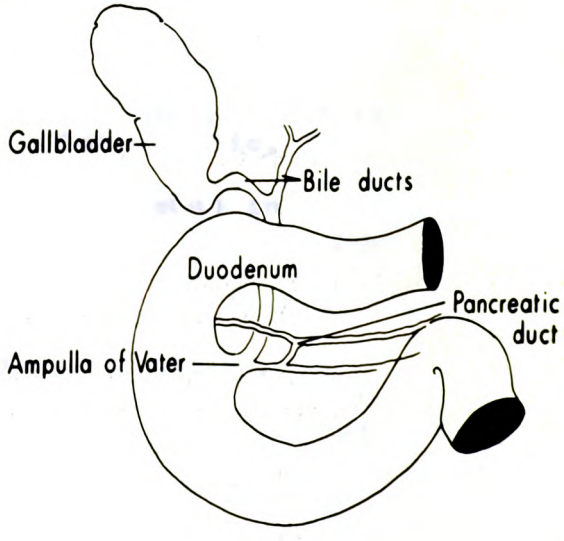
DISTANT, Lymph Nodes

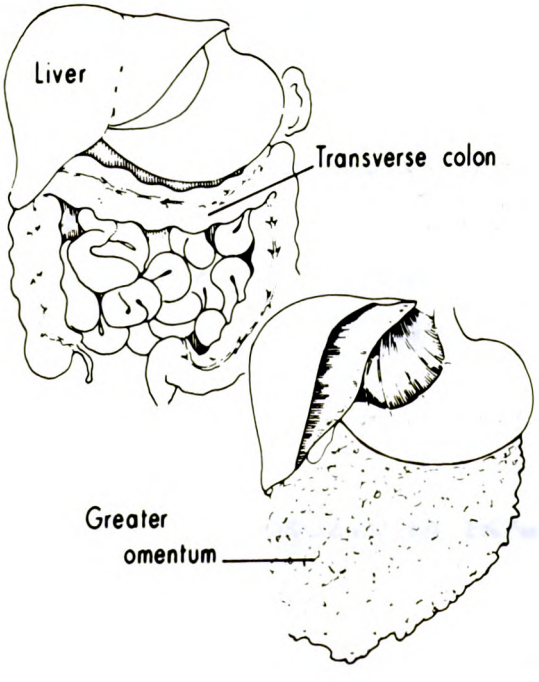
Celiac
Hepatic
Mesenteric, superior or inferior
Para-aortic
Portal
Retroperitoneal
Other distant nodes

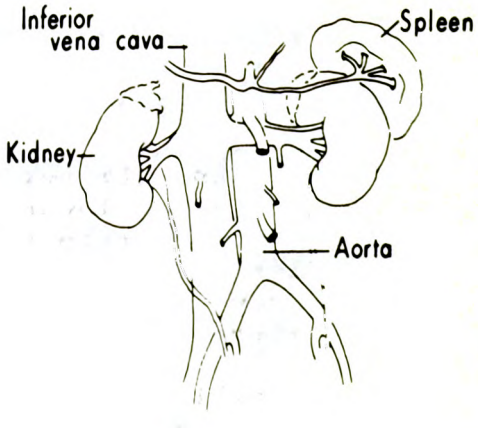
## DUODENUM


Duodenum
Spleen
Pancreatico-
duodenal nodes
Pancreas
I
II
III
IV


Mucosa
Serosa
Submucosa
Muscularis
Circular muscle
Longitudinal muscle


Gallbladder
Bile ducts
Duodenum
Pancreatic
duct
Ampulla of Vater


Liver
Transverse colon
Greater
omentum


Inferior
vena cava
Spleen
Kidney
Aorta

DUODENUM
520

**IN SITU**: noninvasive

**LOCALIZED**

L if: 1
Invasive cancer confined to a polyp
Confined to submucosa

L if: 2
Muscularis and/or serosa invaded

L if: 3
Intraluminal to jejunum

L if: x
Localized, NOS

**REGIONAL**, Direct Extension

R if: 1
Periduodenal tissue
Mesentery, including mesenteric fat
Stomach
Extrahepatic bile duct(s), including ampulla of Vater
Pancreas, including pancreatic duct

R if: 2
Greater omentum
Major blood vessel(s): aorta, superior mesenteric artery or vein, vena cava, portal vein, renal vein, gastroduodenal artery

R if: 3
Small intestine via serosa
Transverse colon, including hepatic flexure
Right and/or quadrate lobe of liver
Gallbladder
Right kidney
Right ureter
Diaphragm
Abdominal wall
Retroperitoneum

DUODENUM
520

REGIONAL, Lymph Nodes

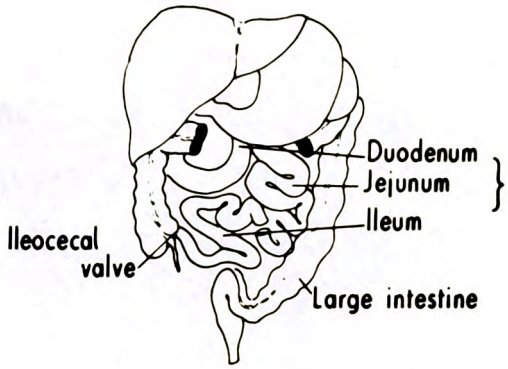
Hepatic: pancreaticoduodenal, infrapyloric, gastroduodenal

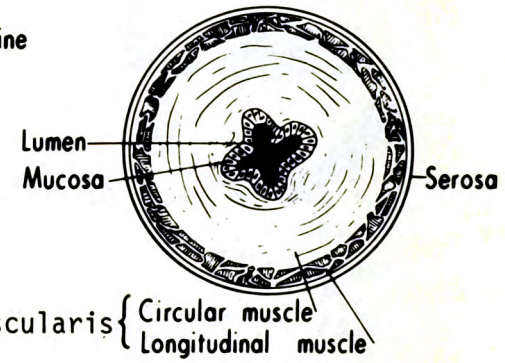
DISTANT, Direct Extension or Metastasis

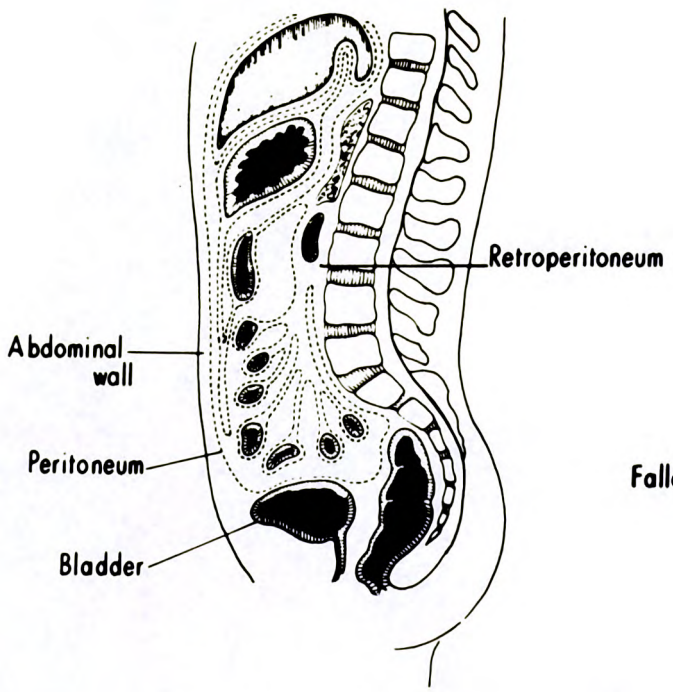
DISTANT, Lymph Nodes

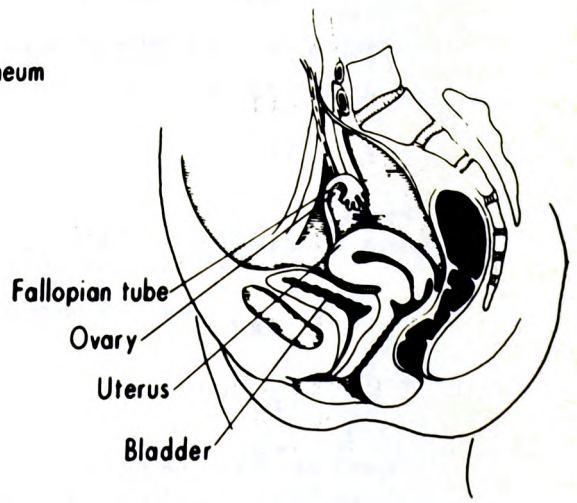
Superior mesenteric
Other distant nodes

## JEJUNUM & ILEUM



**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Invasive cancer confined to a polyp
Confined to submucosa

L if:
2
Muscularis and/or serosa invaded

L if:
3
Intraluminal to ileocecal valve or cecum from ileum
Intraluminal to duodenum from jejunum

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Mesentery, including mesenteric fat

R if:
2
Abdominal wall
Retroperitoneum
Small intestine via serosa
Large intestine, including appendix

**REGIONAL**, Lymph Nodes

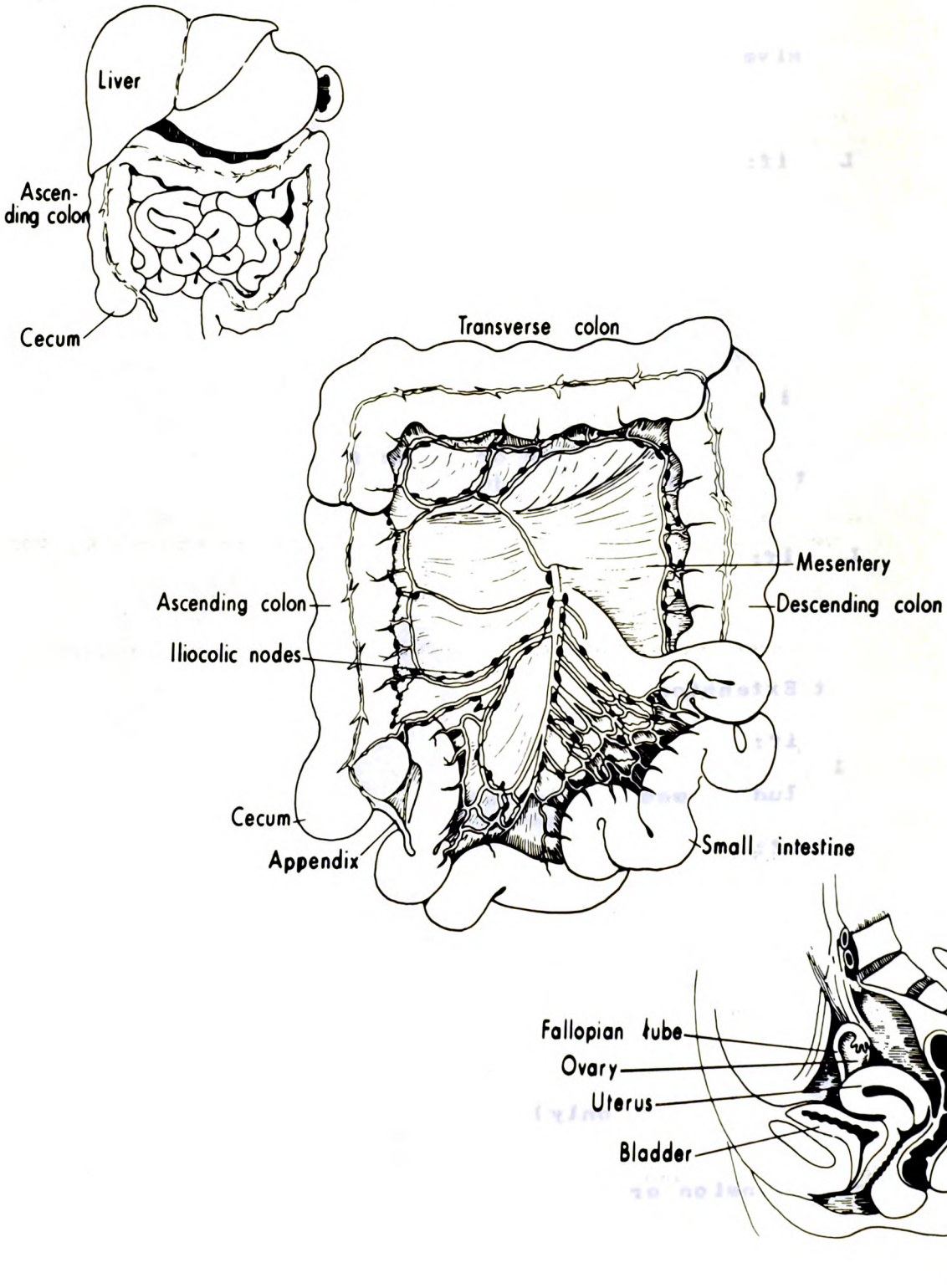
Posterior cecal (terminal ileum only)
Ileocolic (terminal ileum only)
Superior mesenteric

**DISTANT**, Direct Extension or Metastasis

Bladder
Uterus
Ovary
Fallopian tube
Other distant involvement

**DISTANT**, Lymph Nodes

## CECUM & ASCENDING COLON



CECUM
534

IN SITU; noninvasive

LOCALIZED

L if:
1
Confined to mucosa (lamina propria or muscularis mucosae; intramucosal)

L if:
2
Submucosa invaded (thru muscularis mucosae)
Stalk invaded (if polyp)
Superficial invasion

L if:
3
Muscularis propria invaded
Invasion through muscularis propria
Subserosal tissue invaded (including extension through the wall, NOS)

L if:
4
Intraluminal to appendix, cecum or ileocecal valve, ileum, ascending colon
Implants inside the cecum

L if:
x
Localized, NOS

REGIONAL, Direct Extension

R if extension to:
1
Mesentery, including mesenteric fat
Pericolic (pericecal) fat
Adjacent tissue(s), NOS

R if:
2
Invasion of (through) serosa*

R if extension to:
3
Greater omentum
Retroperitoneum
Abdominal wall
Small intestine, other than ileum

*Invasion of serosa may be considered localized in historical comparisons.

CECUM
534

REGIONAL, Lymph Nodes

Epicolic
Paracolic
Cecal
Ileocolic
Right colic (including colic, NOS)
Mesenteric, superior or NOS

Nodule(s) in pericolic fat

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Uterus
Ovary
Fallopian tube
Urinary bladder
Gallbladder
Right kidney or ureter
Liver
Other segment of colon via serosa

D2 if:

Other distant involvement

DISTANT, Lymph Nodes

Inferior mesenteric
Para-aortic
Retroperitoneal
Other distant nodes

ASCENDING COLON
536

**IN SITU**: noninvasive

**LOCALIZED**

L if:
1
Confined to mucosa (lamina propria or muscularis mucosae; intramucosal)

L if:
2
Submucosa invaded (thru muscularis mucosae)
Stalk invaded (if polyp)
Superficial invasion

L if:
3
Muscularis propria invaded
Invasion through muscularis propria
Subserosal tissue invaded (including extension through the wall, NOS)

L if:
4
Intraluminal to cecum, appendix, ileocecal valve, transverse colon
Implants inside the ascending colon

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if extension to:
1
Pericolic fat
Retroperitoneal fat
Adjacent tissue(s), NOS

R if:
2
Invasion of (through) serosa*

R if extension to:
3
Greater omentum
Retroperitoneum
Abdominal wall
Small intestine
Right ureter
Right kidney
Liver, right lobe

*Invasion of serosa may be considered localized in historical comparisons.

ASCENDING COLON
536

REGIONAL, Lymph Nodes

Epicolic
Paracolic
Ileocolic
Right colic (including colic, NOS)
Middle colic
Mesenteric, superior or NOS

Nodule(s) in pericolic fat

DISTANT, Direct Extension or Metastasis

D if extension to:
1

Uterus
Ovary
Fallopian tube
Urinary bladder
Gallbladder
Other segment of colon via serosa

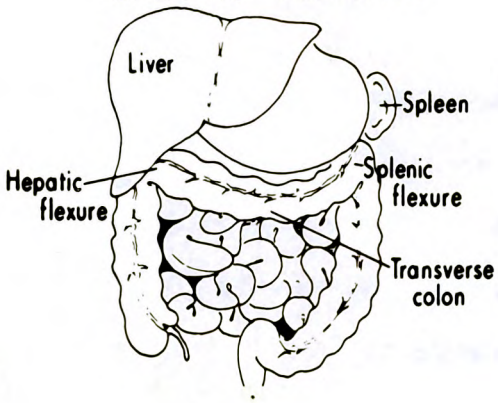
D if:
2

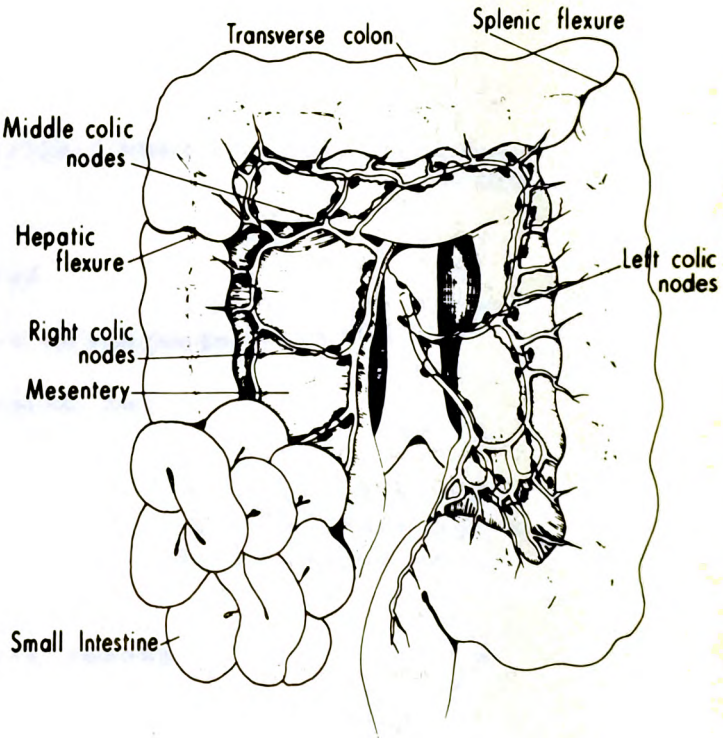
Other distant involvement

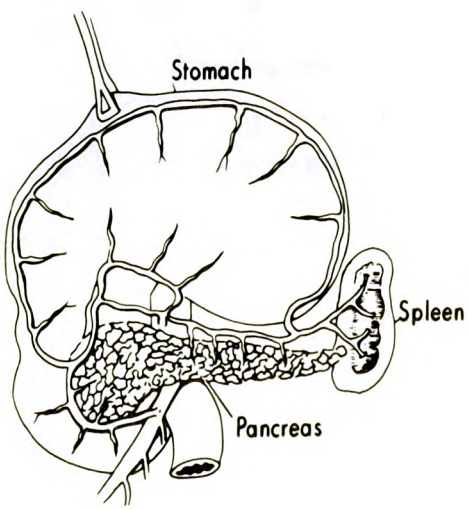
DISTANT, Lymph Nodes

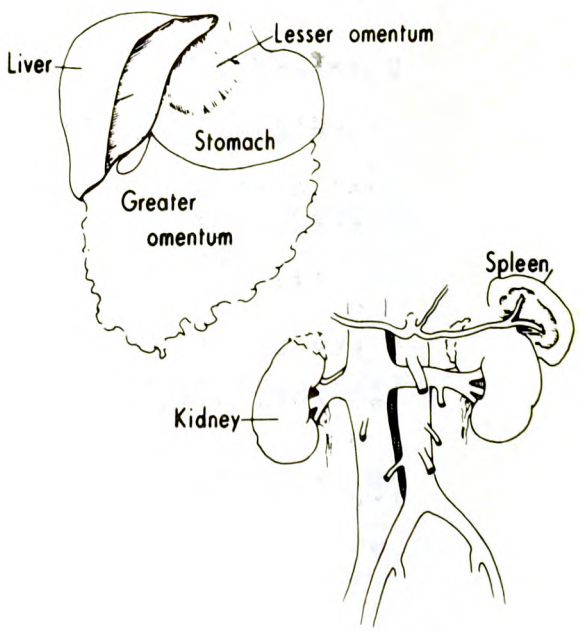
Inferior mesenteric
Para-aortic
Retroperitoneal
Other distant nodes

## HEPATIC FLEXURE, TRANSVERSE COLON & SPLENIC FLEXURE



TRANSVERSE COLON
(Including flexures)
530, 531, 537

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Confined to mucosa (lamina propria or muscularis mucosae; intramucosal)

L if:
2
Submucosa invaded (thru muscularis mucosae)
Stalk invaded (if polyp)
Superficial invasion

L if:
3
Muscularis propria invaded
Invasion through muscularis propria
Subserosal tissue invaded (including extension through the wall, NOS)

L if:
4
Intraluminal to ascending or descending colon

L if:
X
Localized, NOS

**REGIONAL**, Direct Extension

R if extension to:
1
Mesentery (including mesenteric fat); mesocolon
Pericolic fat
Greater omentum; gastrocolic ligament
Adjacent tissue(s), NOS

R if:
2
Invasion of (through) serosa*

R if extension to:
3
Stomach
Small intestine
Liver
Spleen
Pancreas
Retroperitoneum
Gallbladder/ bile ducts
Kidney
Abdominal wall

*Invasion of serosa may be considered localized in historical comparisons.

**TRANSVERSE COLON**
**(Including flexures)**
**530, 531, 537**

REGIONAL, Lymph Nodes

Epicolic
Paracolic
Right colic for hepatic flexure only
Middle colic
Colic, NOS
Left colic for splenic flexure only
Inferior mesenteric for splenic flexure only
Superior mesenteric for hepatic flexure and transverse colon only
Mesenteric, NOS

Nodule(s) in pericolic fat

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Other segment of colon via serosa
Diaphragm
Ureter
Adrenal gland
Ovary

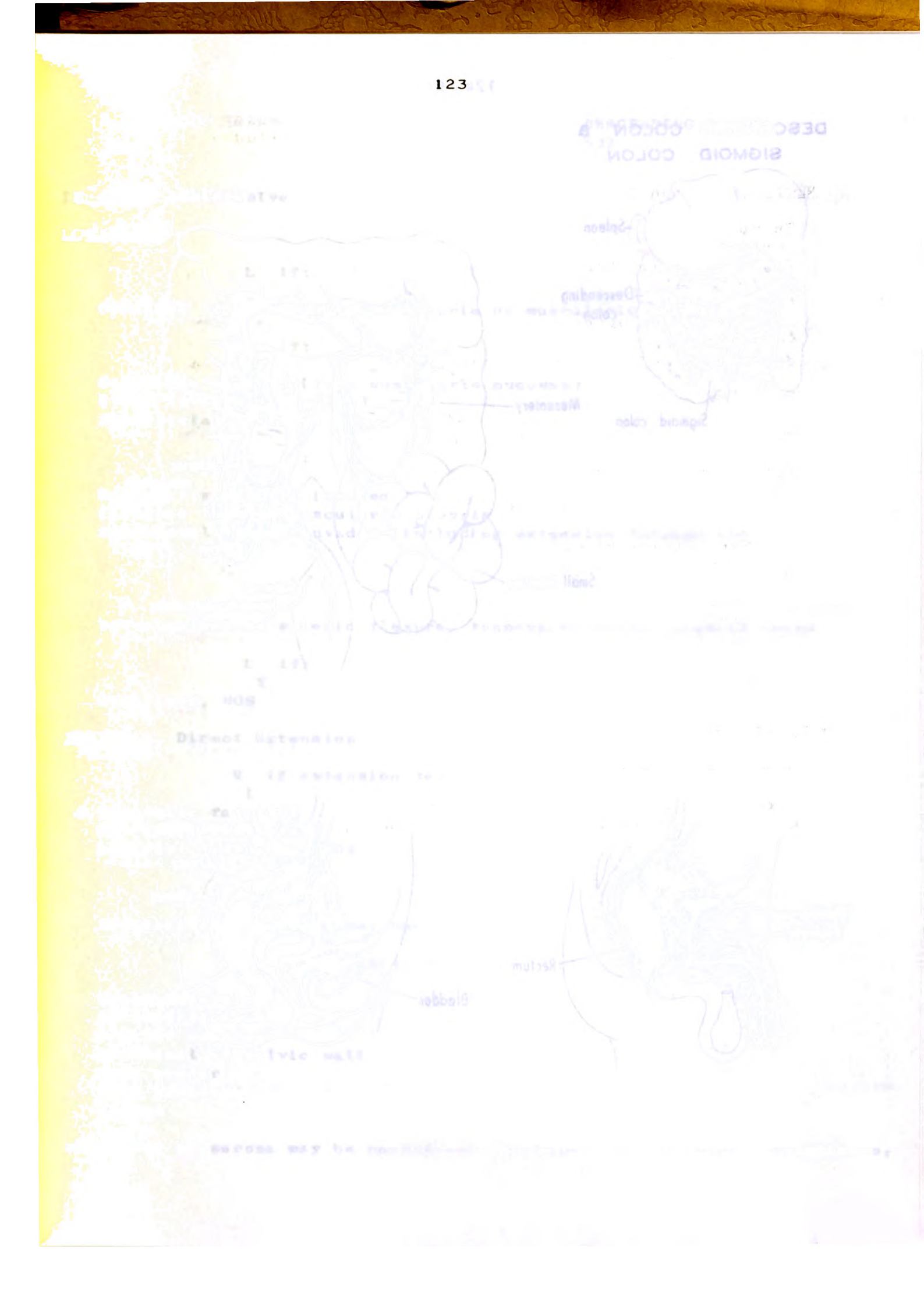
D2 if:

Other distant involvement

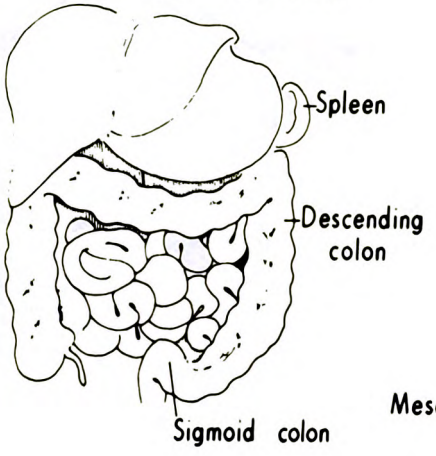
DISTANT, Lymph Nodes

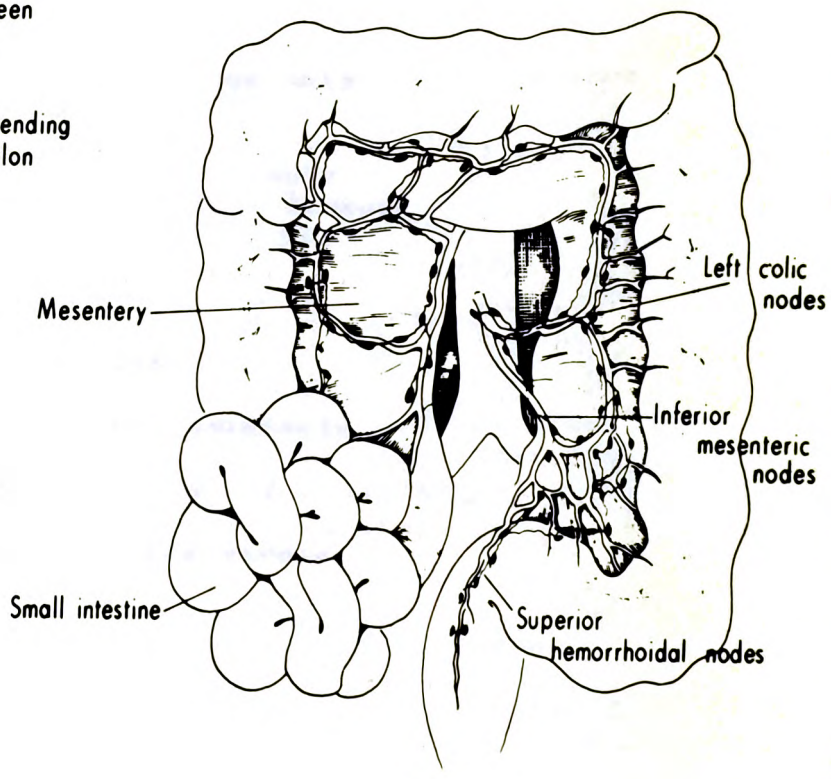
Para-aortic or retroperitoneal

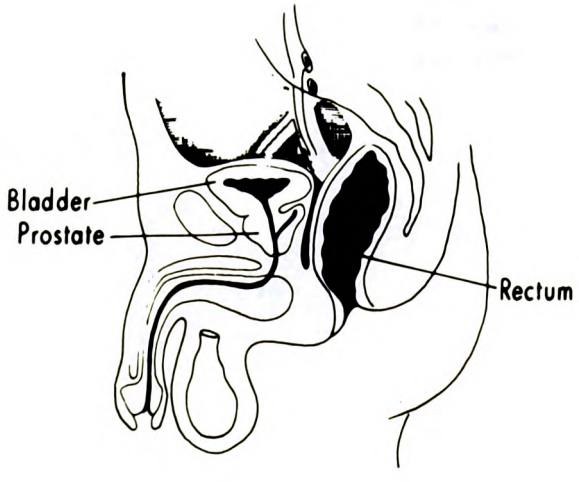
Inferior mesenteric for hepatic flexure and transverse colon only
Superior mesenteric for splenic flexure only

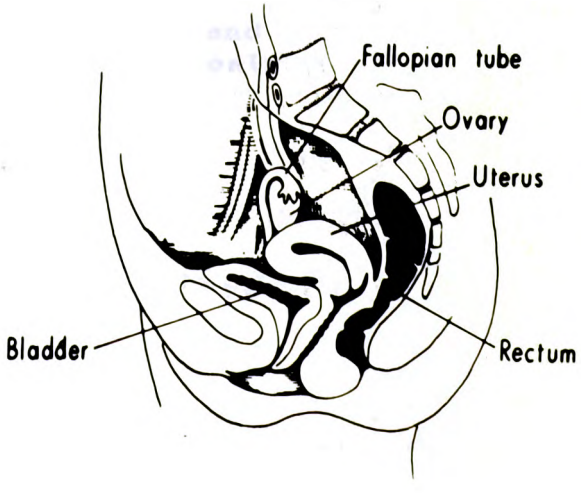


## DESCENDING COLON & SIGMOID COLON



DESCENDING COLON
532

IN SITU; noninvasive

LOCALIZED

L if:
1
Confined to mucosa (lamina propria or muscularis mucosae)

L if:
2
Submucosa invaded (thru muscularis mucosae)
Stalk invaded (if polyp)
Superficial invasion

L if:
3
Muscularis propria invaded
Invasion through muscularis propria
Subserosal tissue invaded (including extension through the wall, NOS)

L if:
4
Intraluminal to splenic flexure, transverse colon, sigmoid colon

L if:
X
Localized, NOS

REGIONAL, Direct Extension

R if extension to:
1
Pericolic fat, NOS
Retroperitoneal fat
Adjacent tissue(s), NOS

R if:
2
Invasion of (through) serosa*

R if extension to:
3
Small intestine
Retroperitoneum
Greater omentum
Abdominal or pelvic wall
Left ureter
Left kidney
Spleen

*Invasion of serosa may be considered localized in historical comparisons.

DESCENDING COLON
532

REGIONAL, Lymph Nodes

Epicolic
Paracolic
Left colic (including colic, NOS)
Mesenteric, inferior or NOS

Nodule(s) in pericolic fat

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Uterus
Ovary
Fallopian tube
Other segment of colon via serosa

D2 if:

Other distant involvement

DISTANT, Lymph Nodes

Para-aortic
Retroperitoneal
Superior mesenteric
Other distant nodes

SIGMOID COLON
533

IN SITU; noninvasive

LOCALIZED

L if:
1
Confined to mucosa (lamina propria or muscularis mucosae; intramucosal)

L if:
2
Submucosa invaded (thru muscularis mucosae)
Stalk invaded (if polyp)
Superficial invasion

L if:
3
Muscularis propria invaded
Invasion through muscularis propria
Subserosal tissue invaded (including extension through the wall, NOS)

L if:
4
Intraluminal to descending colon, rectosigmoid, or rectum

L if:
X
Localized, NOS

REGIONAL, Direct Extension

R if extension to:
1
Mesentery (including mesenteric fat); mesosigmoid
Pericolic fat
Adjacent tissue(s), NOS

R if:
2
Invasion of (through) serosa*

R if extension to:
3
Greater omentum
Abdominal or pelvic wall
Small intestine

*Invasion of serosa may be considered localized in historical comparisons.

SIGMOID COLON
533

**REGIONAL**, Lymph Nodes

Epicolic
Paracolic
Colic, NOS
Sigmoidal
Superior hemorrhoidal
Superior rectal
Mesenteric, inferior or NOS

Nodule(s) in pericolic fat

**DISTANT**, Direct Extension or Metastasis

D1 if extension to:

Uterus
Cul de sac (rectouterine pouch)
Ovary
Fallopian tube
Ureter
Urinary bladder
Other segment of colon via serosa

D2 if:

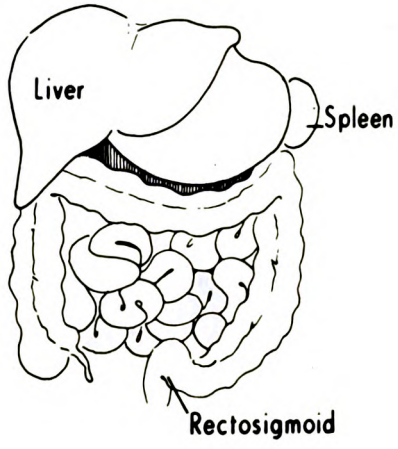
Other distant involvement

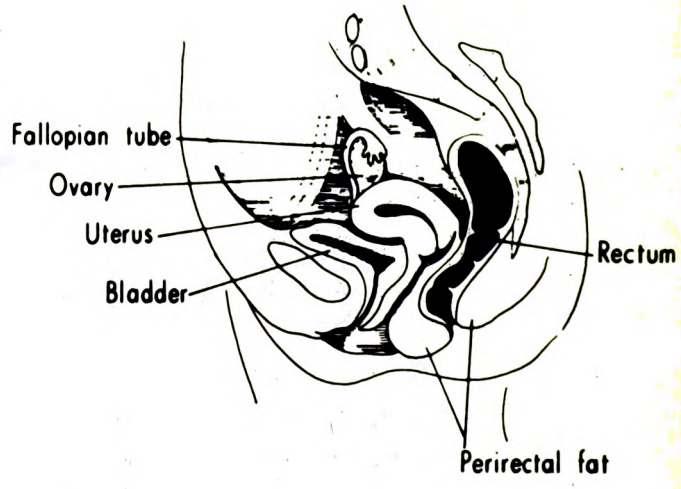
**DISTANT**, Lymph Nodes

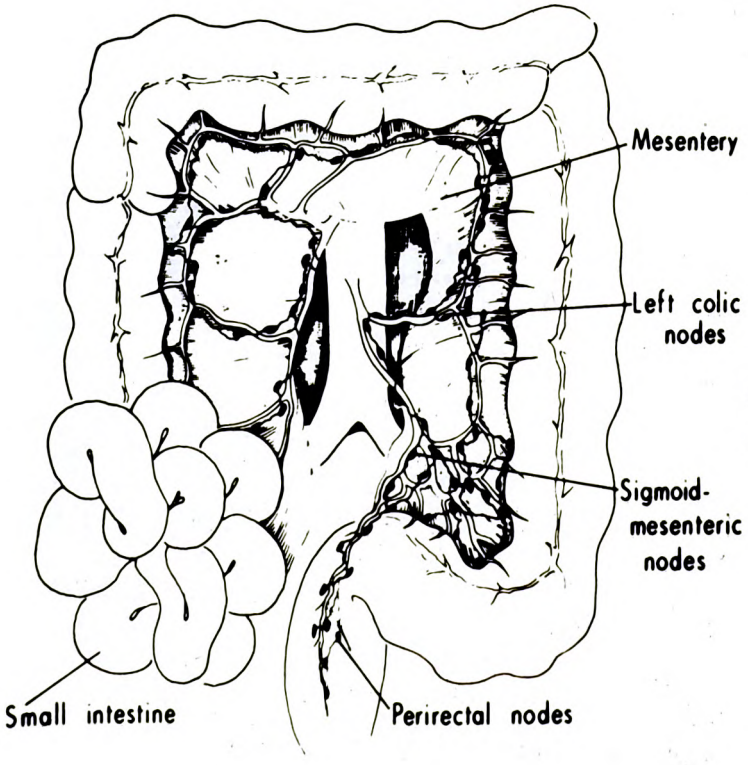
Para-aortic
Retroperitoneal
Superior mesenteric
Other distant nodes

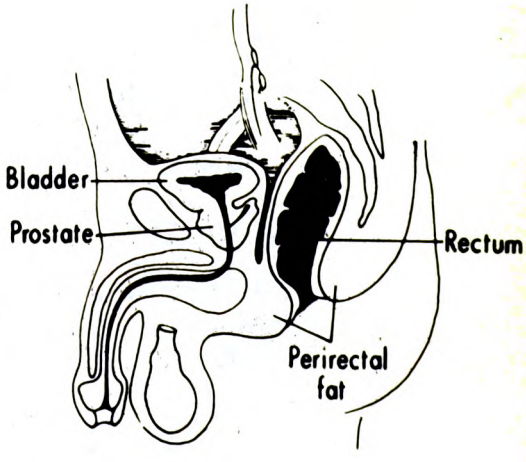
Fallopian tube
Ovary
Ureter
Bladder

## RECTOSIGMOID



RECTOSIGMOID
540

IN SITU; noninvasive

LOCALIZED

L if:
1
Confined to mucosa (lamina propria or muscularis mucosae; intramucosal)

L if:
2
Submucosa invaded (thru muscularis mucosae)
Stalk invaded (if polyp)
Superficial invasion

L if:
3
Muscularis propria invaded
Invasion through muscularis propria
Subserosal tissue invaded (including through the wall, NOS)

L if:
4
Intraluminal to sigmoid colon or rectum

L if:
X
Localized, NOS

REGIONAL, Direct Extension

R if extension to:
1
Mesentery, including mesenteric fat
Pericolic (perirectal) fat
Adjacent tissue(s), NOS

R if:
2
Invasion of (through) serosa*

R if extension to:
3
Small intestine
Cul de sac (rectouterine pouch)
Pelvic wall/ pelvic plexuses

*Invasion of serosa may be considered localized in historical comparisons.

RECTOSIGMOID
540

REGIONAL, Lymph Nodes

Paracolic (including colic, NOS)
Pararectal
Hemorrhoidal, superior or middle
Sigmoidal
Internal iliac (hypogastric)
Mesenteric, inferior or NOS

Nodule(s) in pericolic fat

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Uterus
Vagina
Urinary bladder and/or ureter
Prostate
Skeletal muscles of pelvic floor
Fallopian tube
Ovary
Other segment of colon via serosa

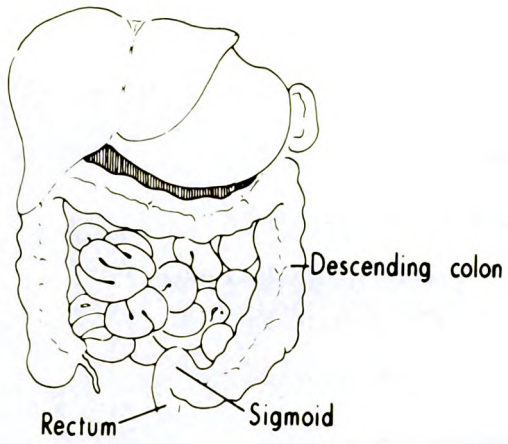
D2 if:

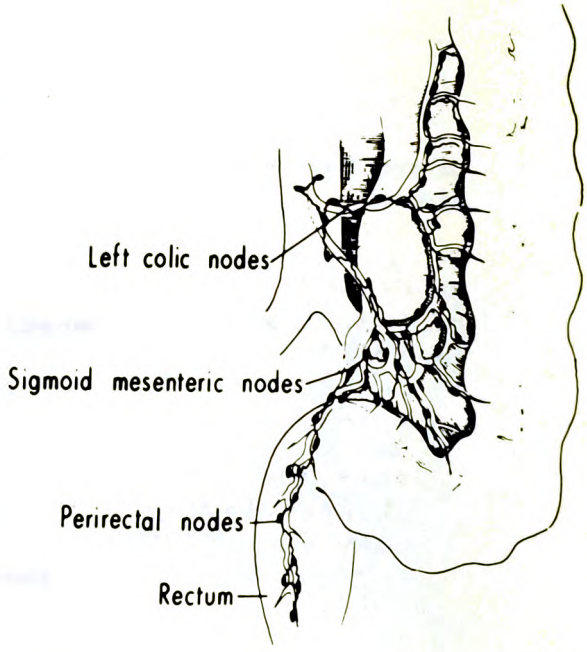
Other distant involvement

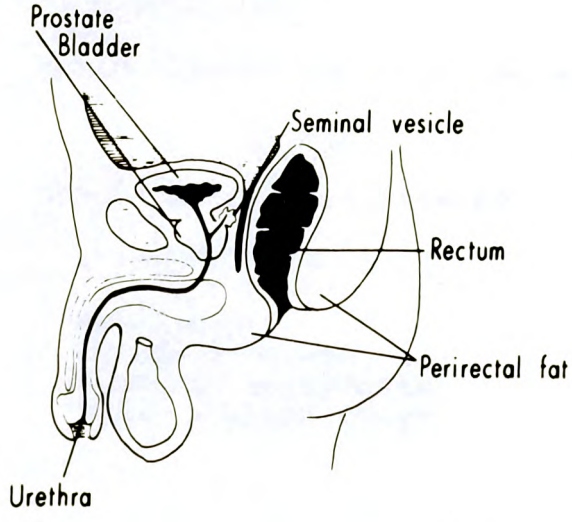
DISTANT, Lymph Nodes

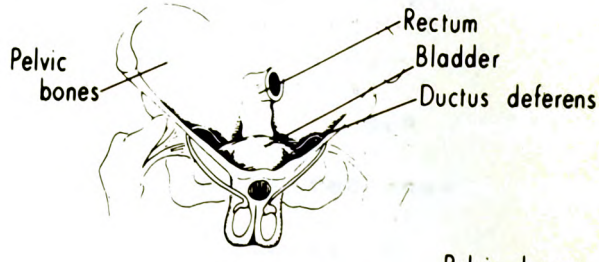
Para-aortic
Retroperitoneal
Superior mesenteric
Other distant nodes

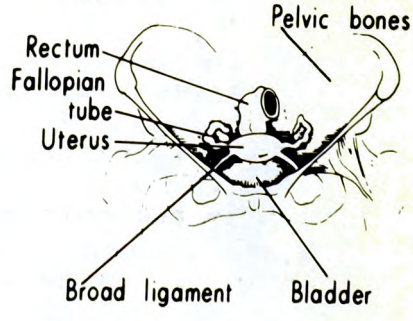
# RECTUM

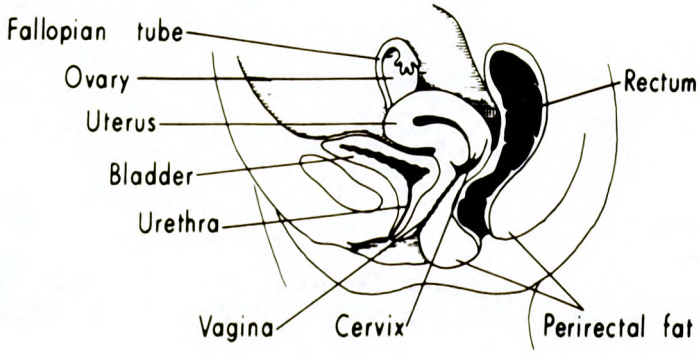

Descending colon
Rectum
Sigmoid


Left colic nodes
Sigmoid mesenteric nodes
Perirectal nodes
Rectum


Prostate
Bladder
Seminal vesicle
Rectum
Perirectal fat
Urethra


Pelvic bones
Rectum
Bladder
Ductus deferens


Pelvic bones
Rectum
Fallopian tube
Uterus
Broad ligament
Bladder


Fallopian tube
Ovary
Uterus
Bladder
Urethra
Rectum
Vagina
Cervix
Perirectal fat

RECTUM
541

IN SITU; noninvasive

LOCALIZED

L if:
1
Confined to mucosa (lamina propria or muscularis mucosae)

L if:
2
Submucosa invaded (thru muscularis mucosae)
Stalk invaded (if polyp)
Superficial invasion

L if:
3
Muscularis propria invaded
Invasion through muscularis propria (including extension through wall, NOS)

L if:
X
Localized, NOS

REGIONAL, Direct Extension

R if extension to:
1
Perirectal fat
Rectovaginal septum
Adjacent tissue(s), NOS

R if:
2
Invasion of (through) serosa*

R if extension to:
3
Intraluminal to rectosigmoid or anus

R if extension to:
4
Colon, anus (except intraluminal)
Vagina
Cul de sac (rectouterine pouch)

*Invasion of serosa may be considered localized in historical comparisons.

R if extension to:
5

Urinary bladder/rectovesical fascia, male
Prostate
Seminal vesicle
Ductus deferens
Skeletal muscle of pelvic floor
Pelvic wall

REGIONAL, Lymph Nodes

Pararectal
Hemorrhoidal, superior or middle
Sacral
Sigmoidal
Mesenteric, inferior or NOS
Internal iliac (hypogastric)

Nodule(s) in perirectal fat

DISTANT, Direct Extension or Metastasis

D if extension to:
1

Uterus
Urinary bladder, female
Sacrum
Sacral plexus
Bones of pelvis
Ovary
Urethra
Perineum; perianal skin

D if:
2

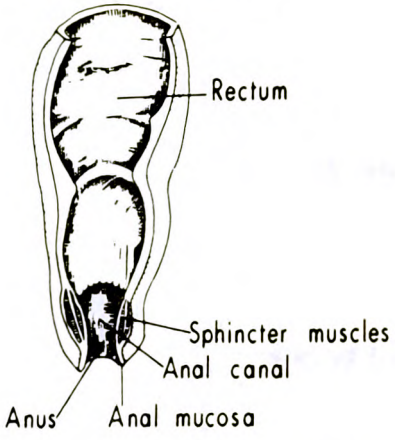
Other distant involvement

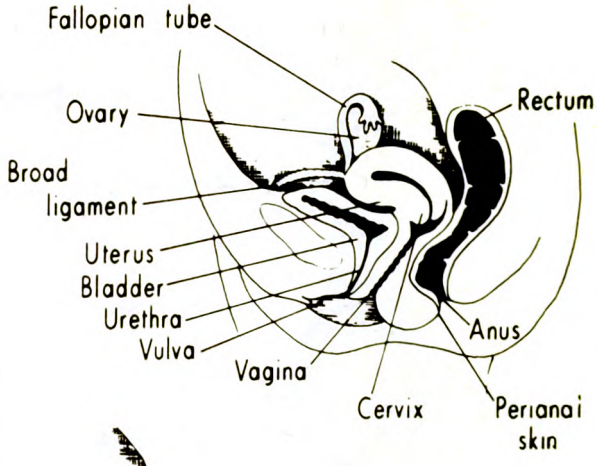
DISTANT LYMPH NODES

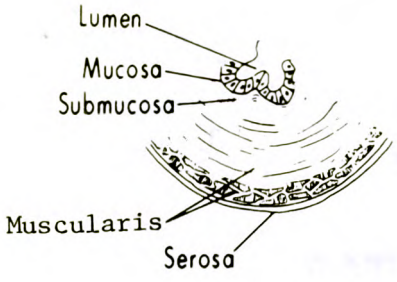
Para-aortic
Retroperitoneal
Superior mesenteric

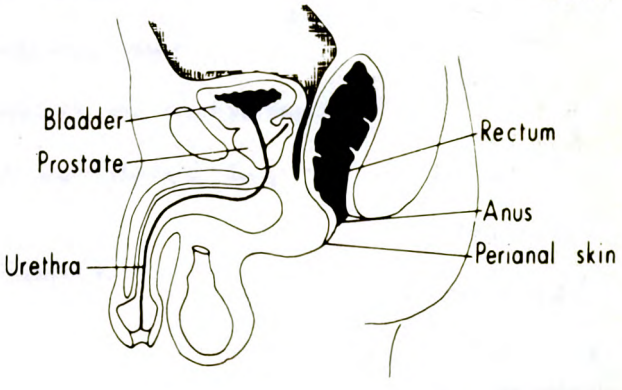
Inguinal
Other distant nodes

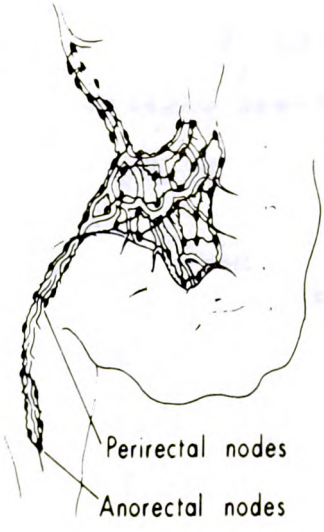
## ANUS, ANAL CANAL & ANAL MUCOSA

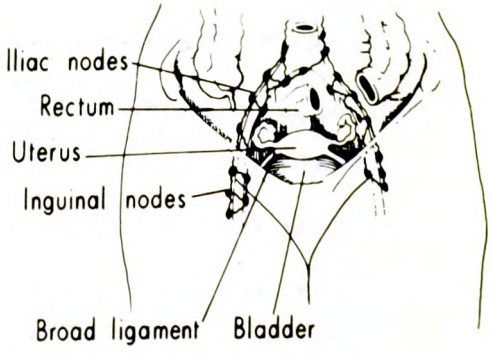


ANAL CANAL
ANUS, NOS
542, 543

IN SITU; noninvasive

LOCALIZED

L if:
1
Incidental finding of malignancy in hemorrhoid
Invasive cancer confined to submucosa

L if:
2
Muscularis (internal sphincter)

L if:
x
Localized, NOS

REGIONAL, Direct Extension

R if:
1
Rectal mucosa or submucosa
Perianal skin
Skeletal muscle(s): anal sphincter (external), levator ani
Ischiorectal fat/tissue

R if:
2
Perineum
Vulva

REGIONAL, Lymph Nodes

Anorectal; pararectal
Interal iliac (hypogastric) for anal canal only
Lateral sacral for anal canal only
Superficial inguinal for anus only

DISTANT, Direct Extension or Metastasis

D if extension to:
1
Prostate
Peritoneum of pelvic floor
Bladder
Urethra
Vagina

D if:
2
Other distant involvement

DISTANT, Lymph Nodes

NOTE: Melanoma of the anus is classified according to the staging scheme for melanoma.

LIVER
INTRAHEPATIC BILE DUCTS
550, 551

LOCALIZED

Confined to one lobe
Satellite nodule(s) confined to one lobe

Localized, NOS

REGIONAL, Direct Extension

R if: 1
More than one lobe involved by contiguous growth
Gallbladder from right lobe of liver

R if: 2
Extrahepatic blood vessel(s): hepatic artery, vena cava, portal vein
Extrahepatic bile duct(s)
Diaphragm
Peritoneum
Ligament(s): falciform, coronary, triangular, hepatogastric, hepatoduodenal
Lesser omentum

REGIONAL, Lymph Nodes

Cardiac
Diaphragmatic: pericardial
Posterior mediastinal
Hepatic: hepatic pedicle, inferior vena cava, hepatic artery
Lateral aortic (retroperitoneal): coronary, renal artery

DISTANT, Direct Extension or Metastasis

D if: 1
Satellite nodules in more than one lobe of liver, surface or parenchyma

D if extension to: 2
Pleura
Pancreas
Stomach

D if: 3
Other distant involvement

DISTANT, Lymph Nodes

# LYMPHATICS OF THE GALLBLADDER

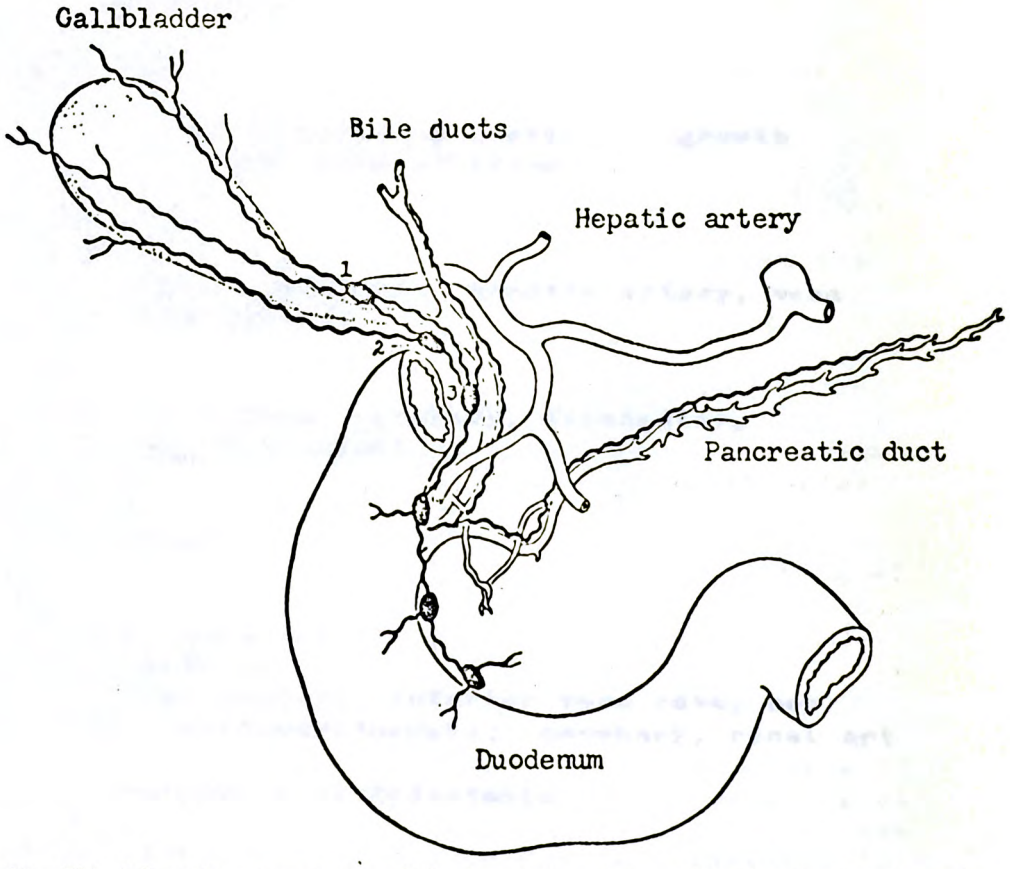



**Fig. 504.** Schematic representation of the lymphatics of the gallbladder showing the pathways to; 1, cystic node; 2, node of anterior border of foramen of Winslow; and, 3, superior retropancreaticoduodenal node.

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GALLBLADDER
560

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Invasive cancer confined to submucosa

L if:
2
Muscularis and/or serosa invaded

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Right lobe of liver
Gallbladder is replaced by tumor (indicate extension to liver)
Extrahepatic bile duct(s), including ampulla of Vater

R if:
2
Blood vessels: cystic artery/vein, hepatic artery, portal vein
Pancreas via extrahepatic bile ducts
Greater omentum
Lesser omentum
Duodenum

**REGIONAL**, Lymph Nodes

Cystic (node of the neck of the gallbladder)
Node of the foramen of Winslow
Hepatic: periportal, pancreaticoduodenal

**DISTANT**, Direct Extension or Metastasis

D if extension to:
1
Pancreas (other than above)
Large intestine
Stomach

D if:
2
Other distant involvement

**DISTANT**, Lymph Nodes

Mesenteric
Para-aortic
Other distant nodes

**EXTRAHEPATIC BILE DUCT**
**AMPULLA OF VATER**
**561, 562**

IN SITU; noninvasive

LOCALIZED

Confined to bile duct(s): cystic, hepatic, common, ampulla of Vater

Localized, NOS

REGIONAL, Direct Extension

R if:
1

Duodenum
Gallbladder
Pancreas
Liver, porta hepatis
Lesser omentum

R if:
2

Transverse colon, including hepatic flexure
Distal stomach
Blood vessels: portal vein, hepatic artery

REGIONAL, Lymph Nodes

Cystic (node of the neck of the gallbladder)
Node of the foramen of Winslow
Hepatic: periportal, pancreaticoduodenal

DISTANT, Direct Extension or Metastasis

DISTANT, Lymph Nodes

Mesenteric
Para-aortic
Other distant nodes

HEAD OF PANCREAS
570

LOCALIZED

Confined to head of pancreas
Body of pancreas involved
With obstruction, but no invasion, of extrahepatic bile duct(s)

Localized, NOS

REGIONAL, Direct Extension

R if:
1
Extrahepatic bile duct(s), including ampulla of Vater
Duodenum
Stomach adjacent to head of pancreas, including stomach, NOS

R if:
2
Liver
Major blood vessel(s): hepatic, pancreaticoduodenal and/or gastroduodenal arteries, superior mesenteric artery or vein, portal vein
Transverse colon, including hepatic flexure
Peritoneum
Mesentery, mesocolon, mesenteric fat
Greater and/or lesser omentum
Gallbladder

R if:
3
Tumor is described as "fixed to adjacent tissues"

REGIONAL, Lymph Nodes

Peripancreatic
Hepatic: pancreaticoduodenal, infrapyloric (subpyloric)
Superior mesenteric
Lateral aortic (retroperitoneal)
Celiac

DISTANT, Direct Extension or Metastasis

D if extension to:
1
Body of stomach
Kidney
Ureter
Adrenal gland
Retroperitoneum
Jejunum
Ileum

D if:
2
Other distant involvement

DISTANT, Lymph Nodes

BODY AND TAIL
OF PANCREAS
571, 572

LOCALIZED

Confined to body and/or tail of pancreas
Head of pancreas involved

Localized, NOS

REGIONAL, Direct Extension

R if:
1

Left kidney
Left ureter
Left adrenal gland
Retroperitoneal soft tissues (retroperitoneal space)

R if:
2

Spleen
Stomach
Liver, porta hepatis
Gallbladder

Small intestine
Splenic flexure
Peritoneum
Mesentery, mesocolon, mesenteric fat
Major blood vessel(s): aorta, celiac artery, hepatic artery, splenic artery or vein, superior mesenteric artery or vein, portal vein

REGIONAL, Lymph Nodes

Splenic: suprapancreatic, splenic hilum, pancreaticolienal
Superior mesenteric
Lateral aortic (retroperitoneal)

DISTANT, Direct Extension or Metastasis

D if extension to:
1

Right kidney
Right ureter
Right adrenal gland
Diaphragm
Large intestine (other than splenic flexure)

D if:
2

Other distant involvement

DISTANT, Lymph Nodes

# DEFINITION OF ANATOMICAL LIMITS OF THE LARYNX ACCORDING TO THE AMERICAN JOINT COMMITTEE ON CANCER STAGING

Anterior Limit is constituted by the anterior or lingual surface of the suprahyoid epiglottis, thyrohyoid membrane, the anterior commissure, and the anterior wall of the subglottic region, which is composed of the thyroid cartilage, the cricothyroid membrane, and the anterior arch of the cricoid cartilage.

Posterior Lateral Limits include the aryepiglottic folds, the arytenoid region, the interarytenoid space, and the posterior surface of the subglottic space represented by the mucous membrane covering the cricoid cartilage.

Superior Lateral Limits are constituted by the tip and the lateral border of the epiglottis.

Inferior Limits are constituted by a plane passing through the inferior edge of the cricoid cartilage.

The larynx is divided into the following anatomical regions and sites:

| Region | Site |
|---|---|
| Supraglottic | Ventricular bands (false cords), right and left |
| | Arytenoids, right and left |
| | Epiglottis (both lingual and laryngeal aspects)<br>Suprahyoid epiglottis<br>Infrahyoid epiglottis<br>Aryepiglottic folds |
| Glottic | True vocal cords, right and left |
| | Anterior and posterior commissures |
| Subglottic | Right and left walls of the subglottis, exclusive of the undersurface of the cords |

LARYNX
(Excluding cartilage)
610-612, 618-619

**N SITU**; noninvasive

**OCALIZED**

L if:
1
umor limited to one area within a region

Supraglottic region
Laryngeal (posterior) surface of epiglottis
Arytenoid
Aryepiglottic fold
Ventricular band (false cord, vestibular fold)
Ventricular cavity

Glottic region (normal mobility)
Vocal cord, one side
Commissure

Subglottic region on one side

L if:
2
umor extends to adjacent area(s) within a region

Supraglottic region
More than one of the above areas

Glottic region (normal mobility)
Cord and commissure
Both vocal cords

Subglottic region on both sides

L if:
3
lottic region: Fixation of cord(s)

L if:
4
umor involves adjacent region(s)

Supraglottic region
Glottic region (with or without fixation)
Subglottic region

nvolves intrinsic muscle(s): aryepiglottic, arytenoid, cricoarytenoid, cricothyroid, thyroepiglottic, thyroarytenoid, vocalis

L if:
x
ocalized, NOS

**LARYNX**
**(Excluding cartilage)**
**610-612, 618-619**

REGIONAL, Direct Extension

R 1 if:

Pyriform sinus
Postcricoid area
Hypopharynx, NOS
Vallecula, including pharyngoepiglottic and glossoepiglottic folds
Base of tongue from laryngeal surface of epiglottis

R 2 if:

Extends into cricoid and/or thyroid cartilage

REGIONAL, Lymph Nodes

Internal jugular: subdigastric
Anterior deep cervical: prelaryngeal, pretracheal, laterotracheal (recurrent)
Cervical, NOS

DISTANT, Direct Extension or Metastasis

D 1 if extension to:

Extrinsic muscle(s): omohyoid, sternohyoid, sternothyroid, thyrohyoid (strap muscles)
Soft tissues of neck
Thyroid
Skin
Trachea
Upper esophagus

D 2 if:

Other distant involvement

DISTANT, Lymph Nodes

Supraclavicular
Submandibular
Other distant nodes

IN SITU: noninvasive

LOCALIZED

Single tumor ≥ 2 cm. from carina and confined to one lung and/or main stem bronchus

L if:
1
Tumor size is 3.0 cm. or less

L if:
2
Tumor size > 3.0 cm.

L if:
3
Tumor size is unknown

L if:
4
Single tumor of any size < 2 cm. from carina and confined to one lung and/or main stem bronchus

L if:
5
Multiple masses confined to one lung and/or main stem bronchus

L if:
x
Localized, NOS

BRONCHUS AND LUNG
(Excluding carina)
622-625, 628-629

REGIONAL, Direct Extension

R if extension to:
1

Pleura, visceral/NOS
Pericardium, parietal/NOS
Pulmonary ligament

R if tumor involves:
2

Carina
Trachea
Esophagus

Nerve(s):
- Recurrent laryngeal
- Vagus
- Phrenic
- Cervical sympathetic (Horner's syndrome)

Major blood vessel(s):
- Pulmonary artery or vein
- Azygos vein
- Superior vena cava

R if:
x

Extrapulmonary mediastinal extension, NOS

REGIONAL, Lymph Nodes

Intrapulmonary
Hilar (bronchial; parabronchial; pulmonary root)
Subcarinal; carinal

Mediastinal (paratracheobronchial; paratracheal; pericardial; para-esophageal; para-aortic-above diaphragm)

BRONCHUS AND LUNG
(Excluding carina)
622-625, 628-629

**DISTANT**, Direct Extension or Metastasis

D if extension to:
1

Brachial plexus from superior sulcus or Pancoast tumor
Lung and/or main stem bronchus, contralateral
Pericardium, visceral
Heart
Pleura, parietal

D if extension to:
2

Rib, sternum, vertebra
Chest (thoracic) wall
Skeletal muscle
Skin of chest
Diaphragm
Abdominal organs

D if:
3

Other distant involvement

**DISTANT**, Lymph Nodes

Contralateral hilar or mediastinal (including bilateral)
Supraclavicular (transverse cervical)
Scalene
Cervical, NOS
Other distant nodes

LOCALIZED

Confined to bone
Tumor has broken through periosteum but not beyond
Abnormal configuration of bone

Localized, NOS

REGIONAL, Direct Extension

Surrounding tissues, including skeletal muscle(s)
Adjacent bone

REGIONAL, Lymph Nodes

First chain of nodes involved in the area of the tumor

DISTANT, Direct Extension or Metastasis

Skin
Other distant involvement

DISTANT, Lymph Nodes

# LYMPHATICS OF THE SKIN

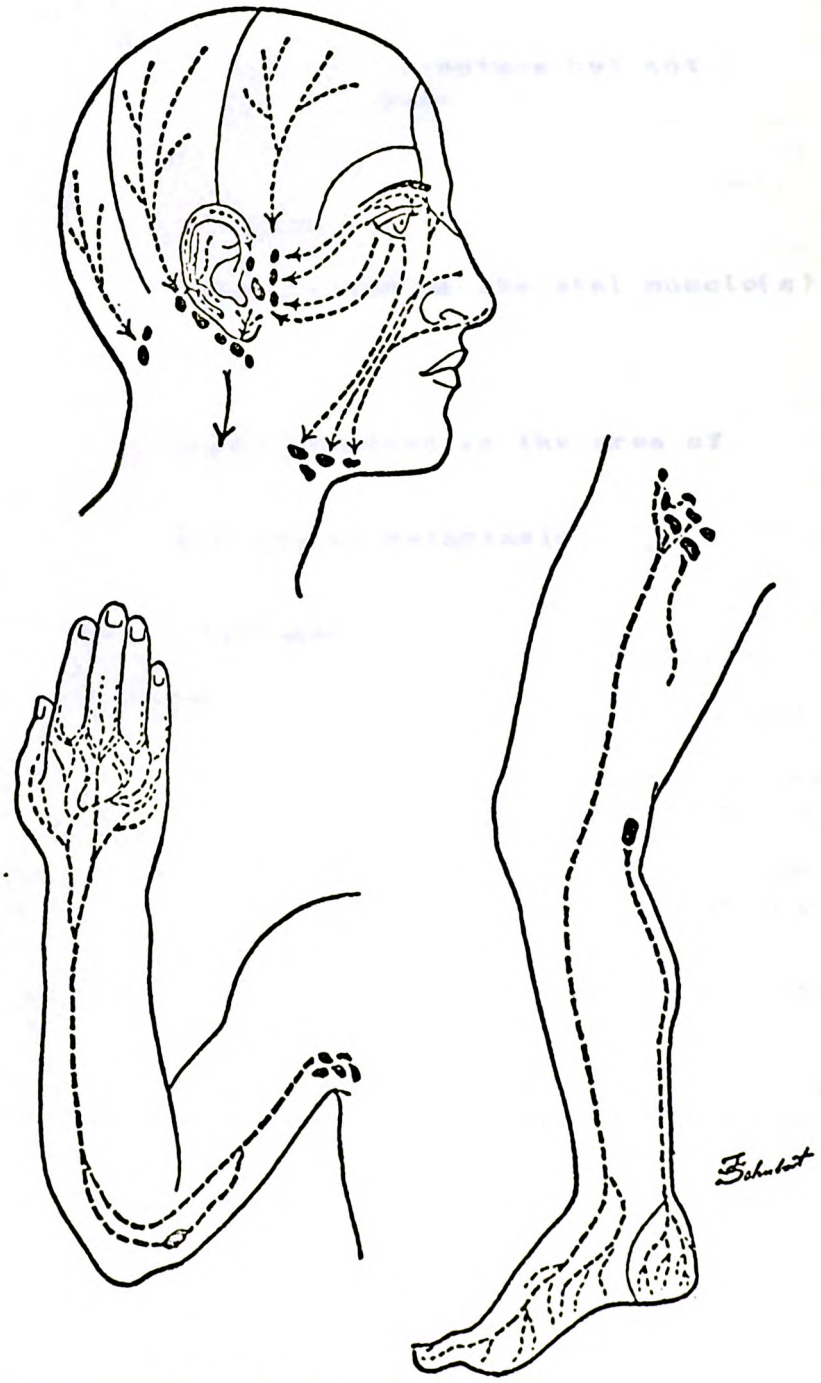

Fig. 100 Lymphatics of the skin of the face and upper and lower extremities.

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MALIGNANT MELANOMA OF SKIN
730-737, 841-844, 871-872, 874
HISTOLOGY: 872 thru 879

IN SITU; intraepidermal (Clark's Level 1)

LOCALIZED

L if tumor invades:
1
Papillary dermis (Clark's Level 2)
OR
Depth of invasion ≤0.75 mm

L if tumor invades:
2
Papillary-reticular dermal interface (Clark's Level 3)
OR
Depth of invasion 0.76 - 1.50 mm

L if tumor invades:
3
Reticular dermis (Clark's Level 4)
OR
Depth of invasion >1.50 mm

L if:
4
Skin ulceration
Satellite nodule(s) within 2 cm. of outer border of primary lesion

L if tumor invades:
5
Subcutaneous tissue (through entire dermis) (Clark's Level 5)

L if:
x
Localized, NOS; confined to skin/dermis, NOS

REGIONAL

R if:
1
Satellite nodule(s) more than 2 cm. from outer border of primary lesion

R if extension to:
2
Underlying cartilage, bone, muscle

MALIGNANT MELANOMA OF SKIN
730-737, 841-844, 871-872, 874
HISTOLOGY: 872 thru 879

**REGIONAL**, Lymph Nodes (by primary site)

Parotid: preauricular, infra-auricular

- Forehead
- Temporal region
- Malar region
- Lateral half of eyelids
- Outer canthus
- Anterior half of ear

Submandibular (submaxillary)

- Midline of forehead
- Medial half of eyelids
- Inner canthus
- Nose
- Lips
- Cheeks

Cervical

- Head and neck tumors, any location
- Scapula, above transverse line

Supraclavicular (transverse cervical)

- Chest wall
- Neck

Axillary

- Arm
- Hand
- Shoulder
- Chest wall
- Scapula (upper back), below transverse line

Epitrochlear

- Hand
- Forearm

Superficial inguinal

- Lumbar region (lower back)
- Anterior abdominal wall
- Perineum
- Perianal region

Femoral

- Lower extremities (excl. heel
- Perineum
- Perianal region

Popliteal

- Heel
- Posterior leg

**DISTANT**, Direct Extension or Metastasis

D1 if:

Metastatic (generalized) skin lesions

D2 if:

Other distant involvement

**DISTANT**, Lymph Nodes

# SKIN OTHER THAN MELANOMA
730-737

OTE: Skin of vulva use 841-844 schemes; penis use 871, 872, 874 schemes

N SITU: intraepidermal

OCALIZED

Single lesion confined to dermis
Skin ulceration
Subcutaneous tissues (through entire dermis)
Localized, NOS

EGIONAL, Direct Extension

Underlying cartilage, bone, and muscle

EGIONAL, Lymph Nodes (by primary site)

Parotid: preauricular, infra-auricular

Forehead
Temporal region
Malar region
Lateral half of eyelids
Outer canthus
Anterior half of ear

Submandibular (submaxillary)

Midline of forehead
Medial half of eyelids
Inner canthus
Nose
Lips
Cheeks

Cervical

Head and neck tumors, any location
Scapula, above transverse line

Supraclavicular (transverse cervical)

Chest wall
Neck

Axillary

Arm
Hand
Shoulder
Chest wall
Scapula (upper back), below transverse line

Epitrochlear

Hand
Forearm

Superficial inguinal

Lumbar region (lower back)
Anterior abdominal wall
Perineum
Perianal region

Femoral

Lower extremities (excl. heel)
Perineum
Perianal region

Popliteal

Heel
Posterior leg

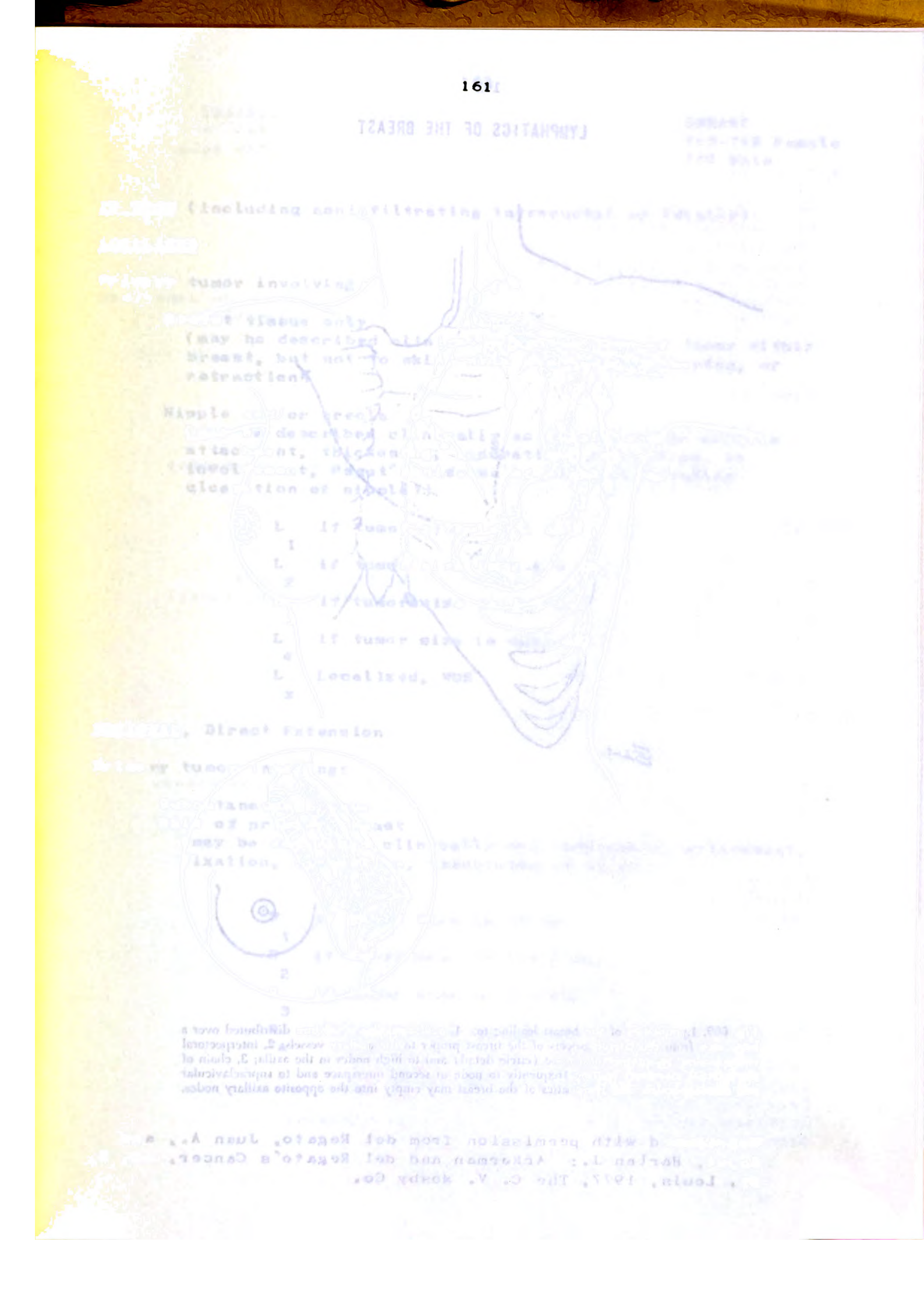
**SKIN OTHER THAN MELANOMA**
**730-737**

**DISTANT**, Direct Extension or Metastasis

D if: 1
Metastatic (generalized) skin lesions

D if: 2
Other distant involvement

**DISTANT**, Lymph Nodes



# LYMPHATICS OF THE BREAST

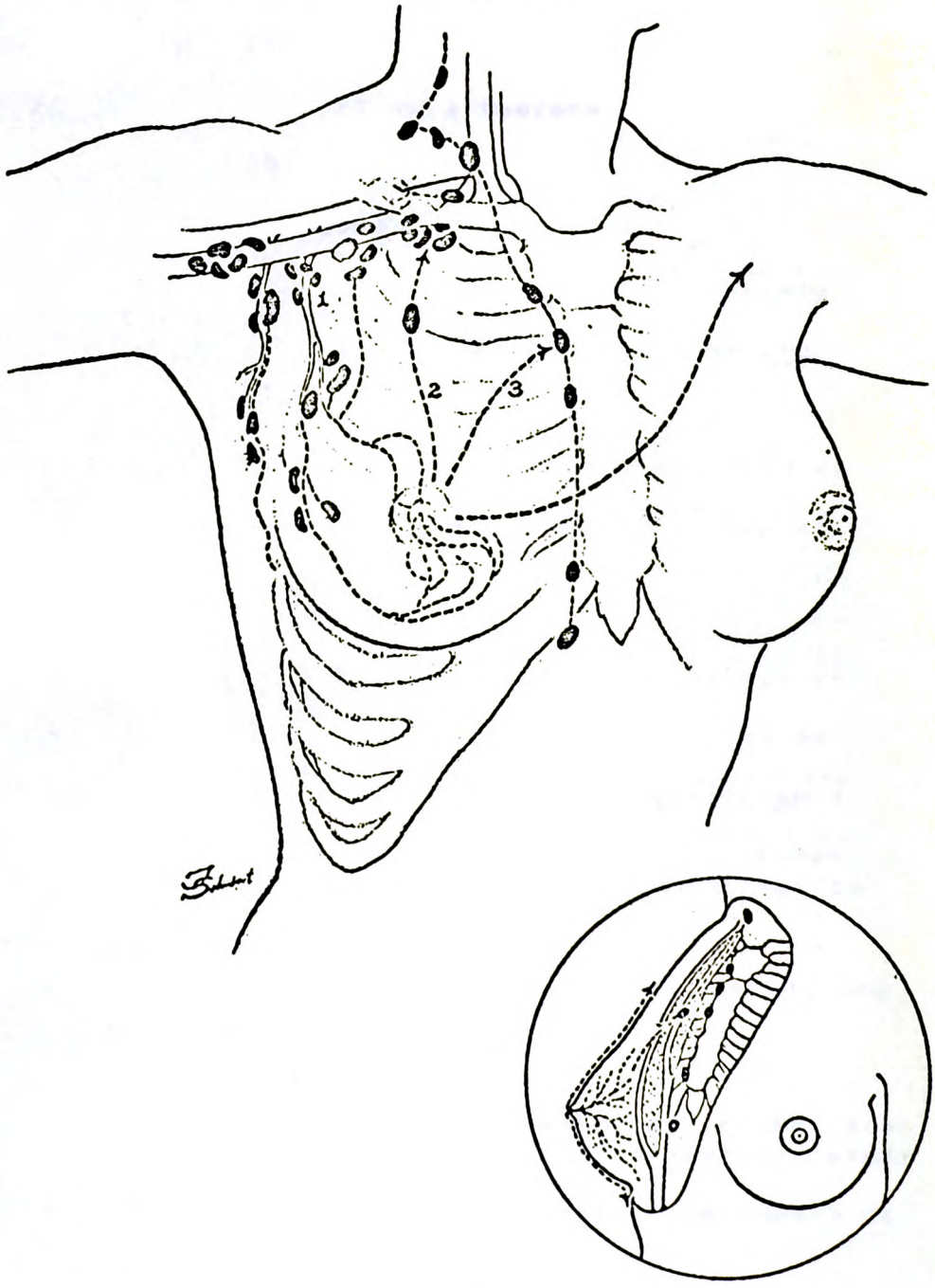



Fig. 669. Lymphatics of the breast leading to, 1, axillary nodes which are distributed over a large area from the lateral aspects of the breast proper to the axillary vessels; 2, interpectoral chain leading to interpectoral node (circle detail) and to high nodes in the axilla; 3, chain of the internal mammary leading frequently to node in second interspace and to supraclavicular and cervical nodes. The lymphatics of the breast may empty into the opposite axillary nodes.

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BREAST
740-749 Female
759 Male

**IN SITU** (including noninfiltrating intraductal or lubular)

**LOCALIZED**

Primary tumor involving:

Breast tissue only
(may be described clinically as fixation of tumor within breast, but not to skin, skin dimpling, tethering, or retraction)

Nipple and/or areola
(may be described clinically as nipple and/or areolar attachment, thickening, induration, retraction, or involvement, Paget's disease of nipple (including ulceration of nipple))

L1 if tumor size is <2 cm.
L2 if tumor size is 2-4.9 cm.
L3 if tumor size is ≥ 5 cm.
L4 if tumor size is unknown
Lx Localized, NOS

**REGIONAL**, Direct Extension

Primary tumor invading:

Subcutaneous tissue
Skin of primary breast
(may be described clinically as: adherence, attachment, fixation, induration, thickening of skin)

R1 if tumor size is <2 cm.
R2 if tumor size is 2-4.9 cm.
R3 if tumor size is ≥ 5 cm.
R4 if tumor size is unknown

**BREAST**
**740-749 Female**
**759 Male**

Primary tumor of any size with:

Skin edema, peau d'orange, "pigskin"
En curraise, lenticular nodules
Inflammation of skin, erythema
Ulceration of skin of breast
Satellite nodules in skin of primary breast
Pectoral fascia or pectoral muscle involvement (may be described clinically as underlying tissue fixation or attachment)

R if:
5
Tumor of any size with above description

R if:
6
Invasion of (or fixation to) chest wall, ribs, intercostal or serratus anterior muscles

REGIONAL, Lymph Nodes

Low axillary (adjacent to tail of breast)
Mid axillary: central, interpectoral, Rotter's node
High axillary: subclavicular, axillary vein nodes, apical
Axillary, NOS
Internal mammary (parasternal)

Nodules in axillary fat

DISTANT, Direct Extension or Metastasis

D if
1
Skin over sternum, upper abdomen, axilla or opposite breast
Satellite nodule(s) in adjacent skin

D if tumor involves:
2
Breast, contralateral
Adrenal gland
Ovary

D if:
3
Other distant involvement

DISTANT, Lymph Nodes

Infraclavicular
Supraclavicular (transverse cervical)
Cervical, NOS
Axillary and/or internal mammary, contralateral
Other distant nodes

# LYMPHATICS OF THE UTERUS

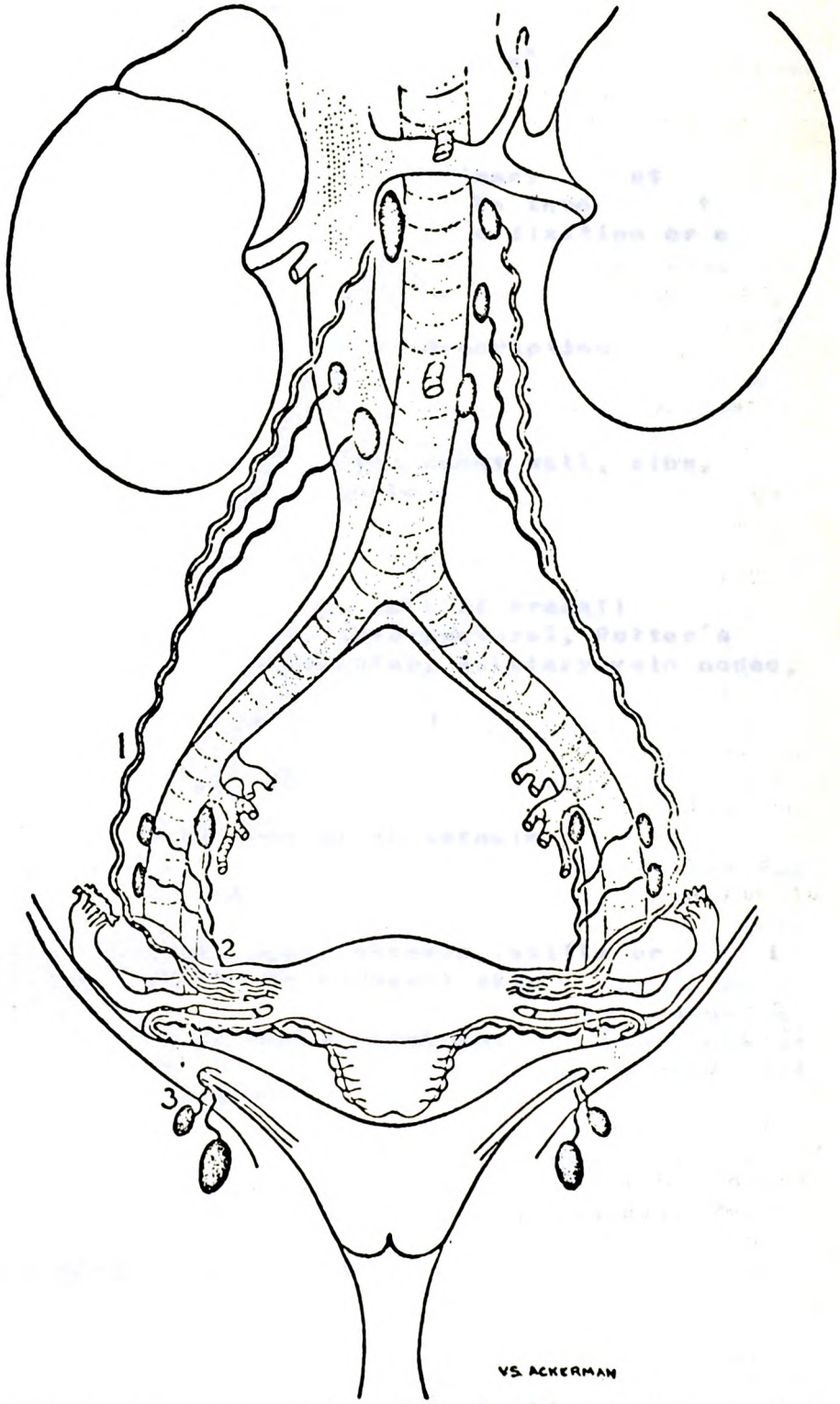


**Fig. 619.** Schematic representation of the lymphatics of the uterus showing, 1, the utero-ovarian pedicle; 2, the external iliac pedicle; and, 3, the round ligament pedicle leading to the inguinal lymph nodes.

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CERVIX UTERI
800-801, 808-809

**IN SITU**

Non-invasive, pre-invasive, intraepithelial
League of Nations Stage 0

**LOCALIZED**

L if:
1
Minimal stromal invasion; "microinvasion"

L if:
2
Invasive cancer confined to cervix

L if:
x
League of Nations Stage I

**REGIONAL**, Direct Extension

R if extension to:
1
Corpus uteri (body of uterus)

R if extension to:
2
Upper 2/3 of vaginal wall (including fornices and vagina, NOS)
Parametrium
Ligaments: broad, uterosacral, cardinal
League of Nations Stage II

R if extension to:
3
Lower 1/3 of vaginal wall
Pelvic wall(s)
League of Nations Stage III

R if extension to:
4
Rectal and/or bladder wall (excluding mucosa)
Bullous edema of bladder mucosa
Cul de sac (rectouterine pouch)

REGIONAL, Lymph Nodes

Hypogastric
Iliac (common, internal, external)
Obturator
Paracervical
Parametrial/pelvic, NOS
Sacral (laterosacral, presacral, sacral promontory, uterosacral)

DISTANT, Direct Extension or Metastasis

D1 if extension to:
Bladder mucosa
Rectal mucosa
Ureter
Urethra
Sigmoid colon
Small intestine
Vulva
Ovary and/or fallopian tube

D2 if:
"Frozen pelvis"

D3 if:
Other distant involvement

Dx if:
League of Nations Stage IV

DISTANT, Lymph Nodes

Aortic (para-aortic, periaortic, lumbar)
Inguinal
Other distant nodes

IN SITU, pre-invasive, non-invasive

LOCALIZED

L if:
1
Invasive cancer confined to endometrium

L if:
2
Myometrium/serosa (perimetrium) invaded

Invasive cancer confined to corpus, clinically:
(Depth of invasion unknown)

L if:
3
Sounding of uterine cavity is ≤ 8 cm. from cervical os

L if:
4
Sounding of uterine cavity is > 8 cm. from cervical os

L if:
x
Localized, NOS

REGIONAL, Direct Extension

R if extension to:
1
Cervix uteri, including endocervix

R if extension to:
2
Parametrium
Ligaments: broad, round, uterosacral

R if extension to:
3
Pelvic wall(s)
Ovary and/or fallopian tube(s)

R if extension to:
4
Rectal and/or bladder wall (excluding mucosa)

REGIONAL, Lymph Nodes

Hypogastric
Iliac (common, internal, external)
Obturator
Paracervical
Parametrial/pelvic, NOS
Sacral (laterosacral, sacral promontory, presacral, uterosacral)
Superficial inguinal
Lateral aortic, preaortic

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Vagina
Vulva
Cul de sac (rectouterine pouch)
Rectum or bladder mucosa
Ureter
Sigmoid colon
Small intestine
Serosa of abdominal organs

D2 if:

"Frozen pelvis"

D3 if:

Other distant involvement

DISTANT, Lymph Nodes

OVARY
830

LOCALIZED

Confined to ovarian tissue--one ovary or, if not specified to be metastatic, both ovaries

Localized, NOS

REGIONAL, Direct Extension

Peritoneum (pelvic; immediately adjacent, not implants)
Broad ligament, ipsilateral
Mesovarium, ipsilateral
Fallopian tube, ipsilateral
Adnexa, ipsilateral

REGIONAL, Lymph Nodes

Aortic (lateral and preaortic)
Hypogastric
Iliac (common, internal, external)
Obturator
Retroperitoneal/pelvic, NOS

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Sigmoid
Omentum
Cul de sac (rectouterine pouch)
Uterus
Rectosigmoid, rectum
Small intestine
Bladder, ureter

D2 if:

Implants on ovary, fallopian tube, cul de sac (rectouterine pouch), peritoneum, omentum
Metastatic to contralateral ovary and/or fallopian tube

D3 if:

Other distant involvement

DISTANT, Lymph Nodes

Inguinal
Other distant nodes

FALLOPIAN TUBE
832

LOCALIZED

Confined to fallopian tube(s) (specify bilateral involvement)

Localized, NOS

REGIONAL, Direct Extension

Peritoneum
Broad ligament, ipsilateral
Mesosalpinx, ipsilateral
Ovary, ipsilateral
Uterus (endometrium), ipsilateral

REGIONAL, Lymph Nodes

Aortic (lateral and preaortic)
Hypogastric
Iliac (common, internal, external)
Obturator
Retroperitoneal/pelvic, NOS

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Omentum
Cul de sac (rectouterine pouch)
Sigmoid
Rectosigmoid
Ovary, contralateral
Small intestine

D2 if:

Other distant involvement

DISTANT, Lymph Nodes

Inguinal
Other distant nodes

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Invasive cancer confined to submucosa (stroma)

L if:
2
Musculature invaded

L IF:
x
Localized, NOS

**REGIONAL**, Direct Extension

Cervix
Vulva
Cul de sac (rectouterine pouch)
Vesicovaginal septum (paracystium)
Rectovaginal septum

**REGIONAL**, Lymph Nodes

External iliac
Internal iliac (hypogastric)
Common iliac (sacral promontory)

**DISTANT**, Direct Extension or Metastasis

D if extension to:
1
Urethra
Bladder
Rectum

D if:
2
"Frozen pelvis"

**DISTANT**, Lymph Nodes

Inguinal
Periaortic
Other distant lymph nodes

# LYMPHATICS OF THE VULVA

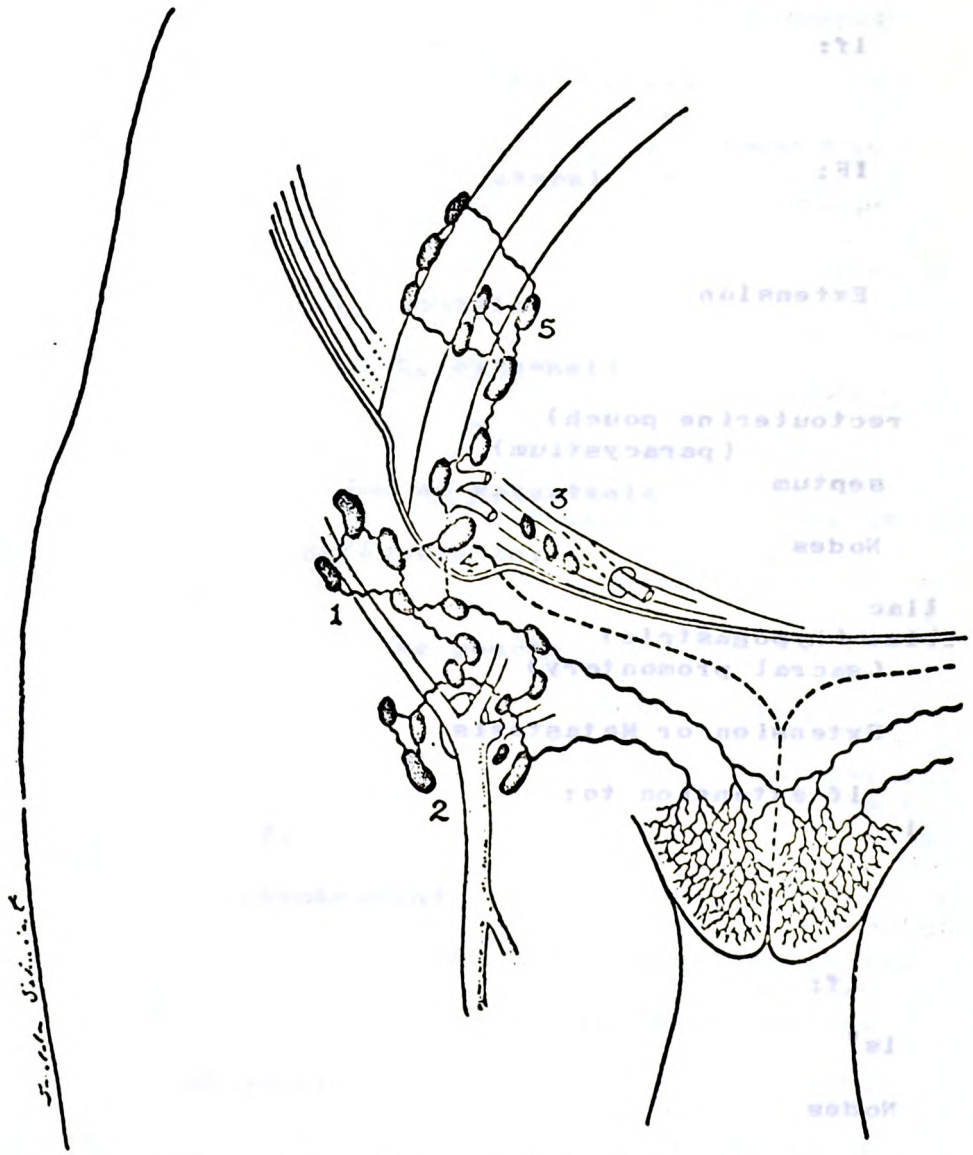


Fig. 662. Lymphatics of the vulva leading to, 1, the superficial inguinal lymph nodes; 2, the superficial femoral nodes; 3, the deep inguinal nodes through the main clearing station; 4, the node of Cloquet; 5, the external iliac nodes.

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VULVA
(including skin of vulva*)
841-844

IN SITU; noninvasive; Bowen's disease

LOCALIZED

Invasive cancer confined to submucosa
Confined to skin of vulva
Musculature invaded

Localized, NOS

REGIONAL, Direct Extension

Vaginal wall or orifice
Urethral orifice
Perineum
Perianal skin
Anus

REGIONAL, Lymph Nodes

Superficial inguinal
Deep inguinal: Rosenmuller's or Cloquet's node
External iliac

DISTANT, Direct Extension or Metastasis

D1 if extension to:
Perineal body
Rectal mucosa

D2 if:
Other distant involvement

DISTANT, Lymph Nodes

*Except melanomas which are classified according to the staging scheme for melanoma.

# LYMPHATICS OF THE PROSTATE

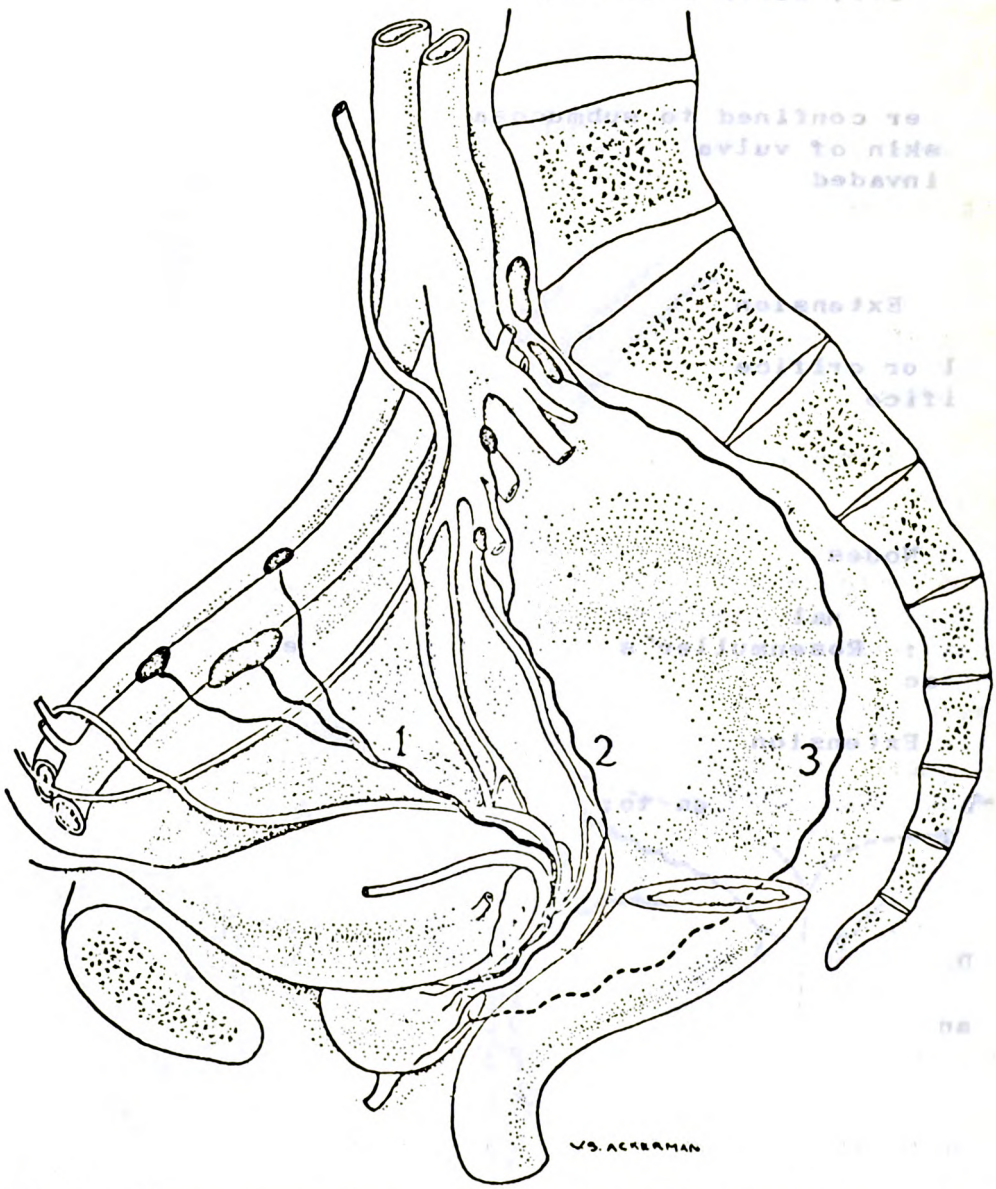


**Fig. 542.** Schematic representation of lymphatics of the prostate showing, 1, external iliac pedicle; 2, hypogastric pedicle; and 3, posterior pedicle. The inferior pedicle which follows a downward direction and ends in hypogastric nodes is not illustrated here.

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**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Invasive cancer confined to prostatic capsule (intra-capsular)

L if:
2
Invasion of prostatic capsule

L if:
3
Prostatic urethra involved

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if extension:
1
Periprostatic tissues
Seminal vesicle(s)

R if:
2
Through prostatic capsule, including "fixation"

R if extension to:
3
Rectovesical (Denonvillier's) fascia
Bladder
Rectum
Extraprostatic urethra (membranous urethra)

PROSTATE
859

REGIONAL, Lymph Nodes

Hypogastric
Iliac (common, internal, external)
Obturator
Periprostatic/pelvic, NOS
Sacral (lateral sacral, sacral promontory, presacral)

DISTANT, Direct Extension or Metastasis

D1 if extension to:
Skeletal muscles: levator ani
Pelvic bone
Pelvic wall
Ureter
Sigmoid colon
Penis

D2 if:
"Frozen pelvis"

D3 if:
Other distant involvement

DISTANT, Lymph Nodes

Aortic (para-aortic, periaortic, lumbar)
Inguinal
Other distant nodes

# LYMPHATICS OF THE TESTIS

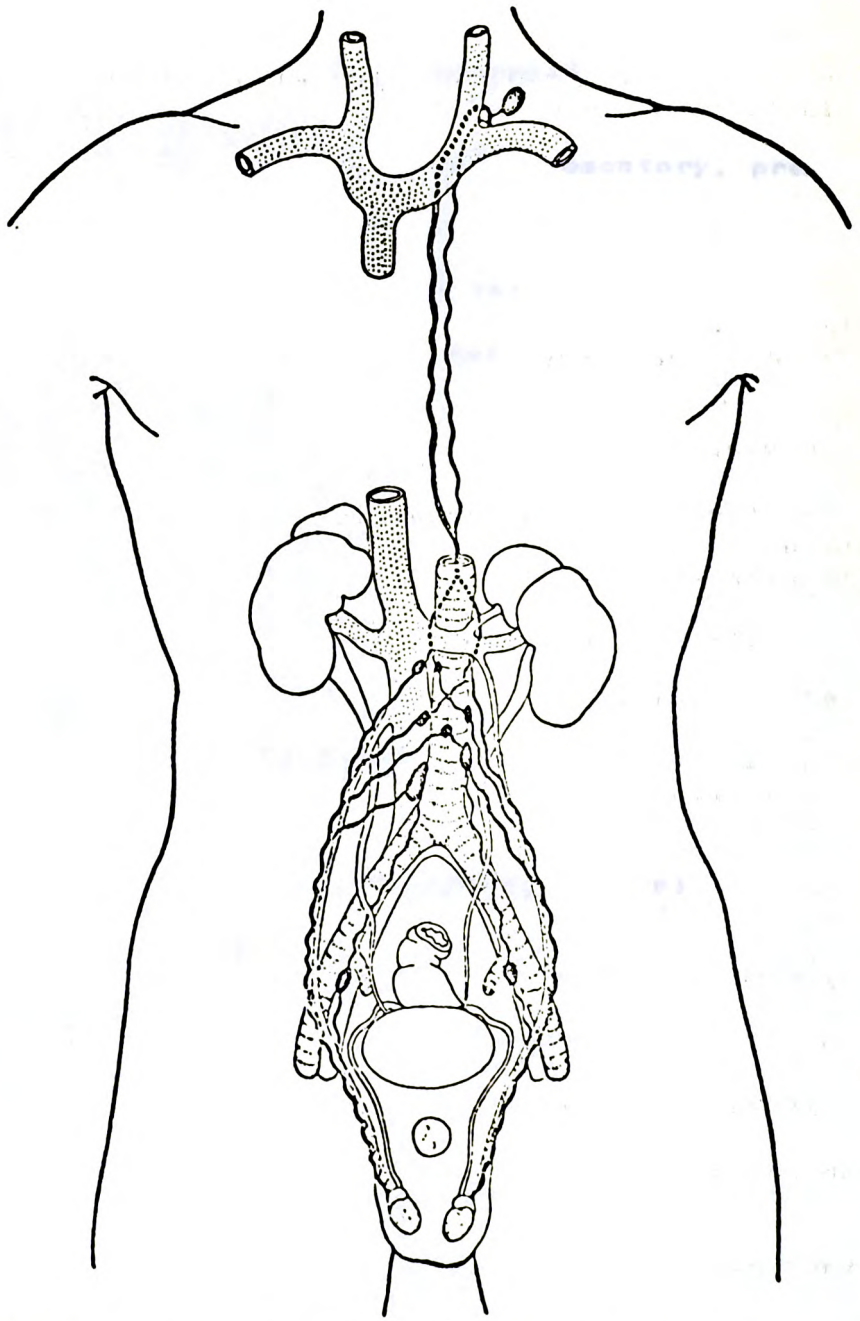

Fig. 562. Schematic representation of the lymphatics of the testis showing main drainage in the para-aortic lymphatics and further lymphatic extension by way of the thoracic duct. The left supraclavicular node is fairly frequently involved. The lymphatics of the epididymis drain into the external iliac lymph nodes.

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TESTIS
860, 869

LOCALIZED

Confined to tunica albuginea (encapsulated tumor)
Tunica vaginalis involved

Localized, NOS

REGIONAL, Direct Extension

Epididymis
Scrotum, ipsilateral
Spermatic cord, ipsilateral
Vas deferens

REGIONAL, Lymph Nodes

Aortic, below level of renal arteries
External iliac
Retroperitoneal/pelvic, NOS

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Ulceration of scrotum
Scrotum, contralteral
Testis, bilateral
Penis

Kidney
Adrenal gland
Retroperitoneum

D2 if:

Other distant involvement

DISTANT, Lymph Nodes

Inguinal
Other distant nodes

IN SITU; noninvasive (Bowen's Disease)

LOCALIZED

Invasive cancer confined to skin of penis, prepuce and/or glans

Localized, NOS

REGIONAL, Direct Extension

R1 if:
Corpus cavernosum

R2 if:
Urethra
Satellite nodule(s) on prepuce or glans
Skin: pubic, scrotal, abdominal, perineum

REGIONAL, Lymph Nodes

External iliac
Internal iliac (hypogastric)
Superficial inguinal
Deep inguinal: Rosenmuller's or Cloquet's node

DISTANT, Direct Extension or Metastasis

Testis
Other distant involvement

DISTANT, Lymph Nodes

*Except melanomas which are classified according to the staging scheme for melanoma.

# LYMPHATICS OF THE BLADDER

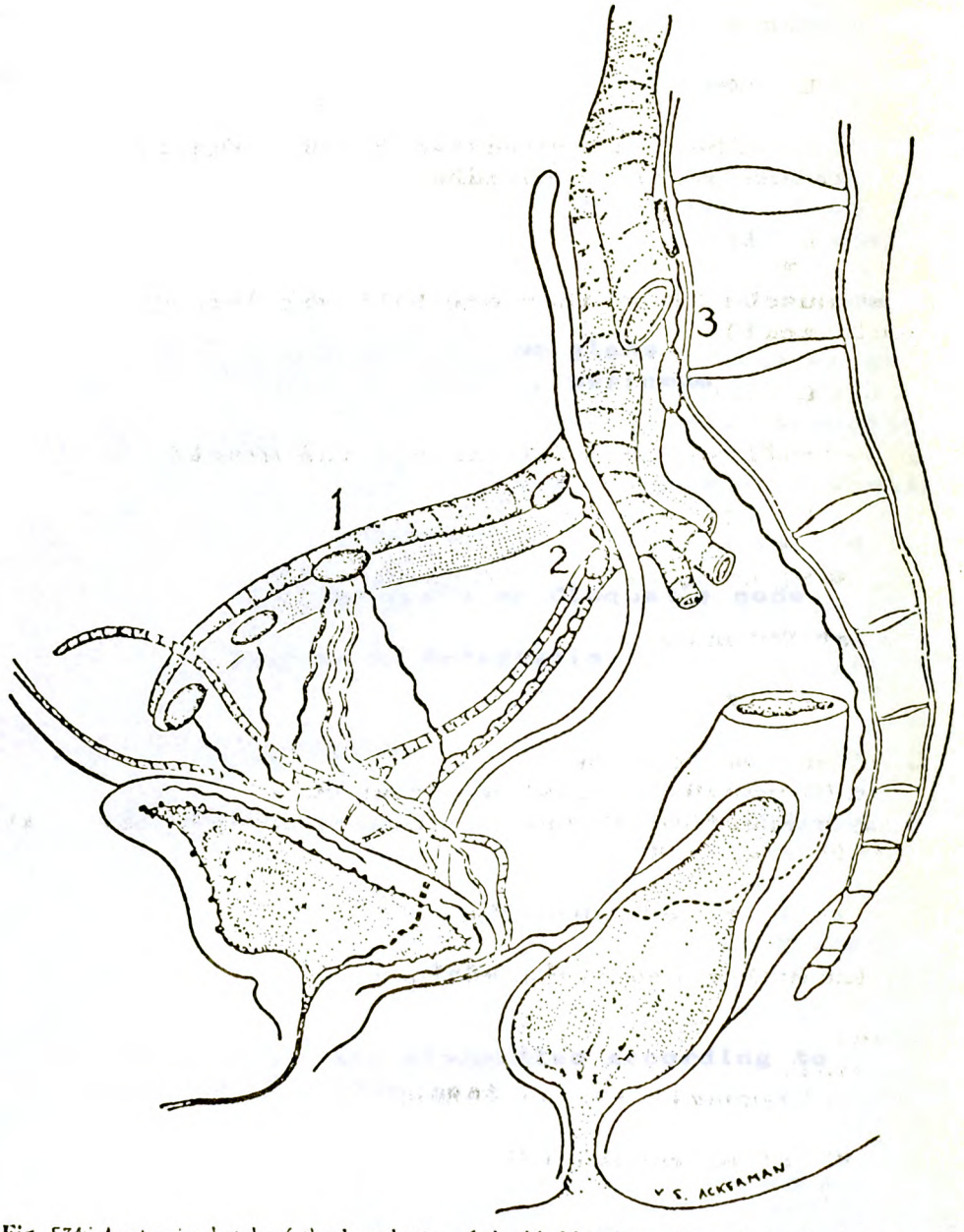


Fig. 534. Anatomic sketch of the lymphatics of the bladder drained mainly by, 1, the external iliac nodes but also by, 2, hypogastric and, 3, common iliac nodes.

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**IN SITU**; noninvasive; intraepithelial

**LOCALIZED**

L if:
1
Confined to mucosa

L if:
2
Submucosa (subepithelial connective tissue; tunica propria; lamina propria) invaded

L if:
3
Superficial muscle (less than one half way through the muscle coat)

L if:
4
Deep muscle (half-way or more through the muscle coat)

L if:
x
Localized, NOS; no detailed information of above

**REGIONAL**, Direct Extension

R if:
1
Invasion of perivesical fat
Invasion of (through) serosa; peritoneum
Surrounding connective tissue (including periprostatic tissue); adjacent tissue, NOS

R if extension to:
2
Prostate, including prostatic urethra
Ureter
Vas deferens
Seminal vesicle
Rectovesical (Denonvillier's) fascia

R if extension to:
3
Rectum, male
Parametrium and uterus, female
Bladder is "fixed"
Vagina
Pubic Bone
Urethra, female

REGIONAL, Lymph Nodes

Perivesical
Hypogastric
Iliac (common, internal, external)
Obturator
Sacral (laterosacral, presacral, sacral promontory)
Pelvic, NOS; regional, NOS

DISTANT, Direct Extension or Metastasis

$D_1$ if extension to:

Tumor fixed to (invading) pelvic wall
Abdominal wall
Rectum, female
Bones, excluding public bone
Sigmoid

$D_2$ if:

Other distant involvement

DISTANT, Lymph Nodes

Aortic (para-aortic, periaortic, lumbar)
Inguinal
Other distant node(s)

KIDNEY (RENAL)
PARENCHYMA
890

**LOCALIZED**

L if tumor confined to:
1
Kidney cortex
Kidney medulla

L if:
2
Renal pelvis or calyces involved

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Perirenal tissue (fat)
Renal (Gerota's) fascia
Retroperitoneal soft tissues (retroperitoneal space)
Blood vessels: perirenal veins, extrarenal portion of renal vein, aorta, renal artery, hilar blood vessels, vena cava
Adrenal gland, ipsilateral
Ureter, including implant(s), ipsilateral

R if:
2
Peritoneum
Diaphragm
Tail of pancreas
Ascending colon from right kidney
Descending colon from left kidney
Duodenum from right kidney

**REGIONAL**, Lymph Nodes

Hilar (small nodes at renal pelvis)
Lateral aortic (retroperitoneal)

KIDNEY (RENAL)
PARENCHYMA
890

**DISTANT**, Direct Extension or Metastasis

D1 if extension to:

Kidney, bilateral
Ureter, contralateral
Adrenal gland, contralateral
Ribs
Stomach
Spleen
Liver

D2 if:

Other distant involvement

**DISTANT**, Lymph Nodes

RENAL (KIDNEY)
PELVIS
891

IN SITU; noninvasive; intraepithelial

LOCALIZED

Invasive cancer confined to:
Submucosa
Musculature

Localized, NOS

REGIONAL, Direct Extension

Peripelvic tissue
Retroperitoneal soft tissue (retroperitoneal space)
Major blood vessel(s): aorta, renal artery or vein, vena cava
Ureter, including implants
Kidney parenchyma
Adrenal gland
Duodenum from right renal pelvis

REGIONAL, Lymph Nodes

Hilar (renal hilus)
Lateral aortic (retroperitoneal)

DISTANT, Direct Extension or Metastasis

D1 if extension to:
Bladder
Spleen
Pancreas
Liver
Descending colon

D2 if:
Other distant involvement

DISTANT, Lymph Nodes

IN SITU; noninvasive; intraepithelial

LOCALIZED

Invasive cancer confined to:
Submucosa
Musculature

Localized, NOS

REGIONAL, Direct Extension

Periuretheral tissue
Retroperitoneal soft tissue (retroperitoneal space)
Psoas muscle

Implant(s) distal in ureter
Bladder
Kidney, ipsilateral

Duodenum from right ureter
Ascending colon from right ureter
Descending colon from left ureter

REGIONAL, Lymph Nodes

Periureteral
Hypogastric
Iliac (common, internal, external)
Lateral aortic
Retroperitoneal/pelvic, NOS

DISTANT, Direct Extension or Metastasis

D1 if extension to:
Uterus
Pancreas
Implants in bladder
Prostate

D2 if:
Other distant involvement

DISTANT, Lymph Nodes

**IN SITU**; noninvasive

**LOCALIZED**

L if:
1
Confined to one lobe and/or isthmus

L if:
2
Both lobes involved
Thyroid gland capsule involved
Multiple foci but confined to thyroid gland

L if:
3
Through capsule of gland, but not beyond

L if:
x
Localized, NOS

**REGIONAL**, Direct Extension

R if:
1
Pericapsular tissues
Strap muscle(s): sternothyroid, omohyoid, sternohyoid
Nerve(s): recurrent laryngeal, vagus

R if:
2
Major blood vessel(s): carotid artery, thyroid artery or vein, jugular vein
Soft tissues of neck
Esophagus
Larynx, including thyroid and cricoid cartilages
Sternocleidomastoid muscle
Tumor is described as "fixed to adjacent tissues"

**REGIONAL**, Lymph Nodes

Anterior deep cervical: prelaryngeal, pretracheal, laterotracheal (recurrent)
Internal jugular: subdigastric
Retropharyngeal
Cervical, NOS

DISTANT, Direct Extension or Metastasis

D1 if extension to:

Trachea
Mediastinal tissues
Skeletal muscle, other than strap muscles and sternocleidomastoid
Bone

D2 if:

Other distant involvement

DISTANT, Lymph Nodes

Submandibular (submaxillary)
Submental
Other distant nodes

LYMPH NODES AND LYMPHOID TISSUE
960-969, 416, 460, 471, 491, 640, 692
Histology: 959 thru 969, 975

Stage I (Localized)

Confined to one lymphatic region above or below the diaphragm

Stage II (Regional)

Involvement of more than one lymphatic region on only one side of the diaphragm

Stage III (Distant [1])

Involvement of lymphatic regions on both sides of the diaphragm

Stage IV (Distant [2])

Bone
Bone marrow
Lung and/or pleura
Liver
Kidney
Gastrointestinal tract (but not primary G.I.)
Skin lesions or subcutaneous nodules (but not primary skin)

SYSTEMIC SYMPTOMS

Night sweats
Unexplained fever
Pruritis
Unexplained weight loss

NOTE: Lymphoid tissue includes spleen, lingual and palatine tonsils, adenoids (pharyngeal tonsils), thymus and Waldeyer's ring, NOS.

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